

Digitizer EX

Design Gallery

EasyDesign

EasyEdit

Digitizer EX V1

EasyDesign

EasyEdit

Design Gallery

INSTRUCTION BOOK

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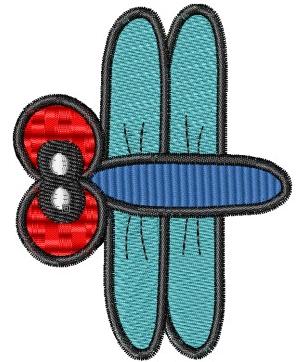
The screen illustrations in this publication are intended to be representations, not exact duplicates of the screen layouts generated by the software.

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Chapter 1

SYSTEM SETUP

This chapter covers all steps necessary to install a new Digitizer EX system to PC. You will also need to connect peripheral devices for use with Digitizer EX. These may include printers, scanners and, of course, your embroidery machine. Different devices are set up in different ways – some in Windows, via the Control Panel, others within Digitizer EX itself. For instructions on connecting devices to your computer and setting up in Windows, see the documentation for the device as well as your Microsoft Windows documentation.



Installation checklist

Use the following as a checklist of all necessary steps to follow when installing and configuring your new Digitizer EX software.

- ❑ **Step 1:** Make sure your system meets the minimum requirements. See [Minimum requirements for Digitizer EX](#) for details.
- ❑ **Step 2:** Whether installing Digitizer EX as new or upgrading an existing installation, read through **all** necessary installation steps carefully before getting started.
- ❑ **Step 3:** When the installation is complete, you will be prompted to restart your computer.

❑ **Step 4:** Connect your machine to the PC. See [Supported machine models and memory cards](#) for details.

❑ **Step 5:** If you are a new user, read carefully through the introductory chapters in the Instruction Book provided with your Digitizer EX installation pack.

❑ **Step 6:** Both new and existing users should read through the online Release Notes for an understanding of new and improved features in this software release. You can access the online Release Notes through the Help menu of your Digitizer EX installation.

Minimum requirements for Digitizer EX

To install Digitizer EX software on your computer, it must meet the following minimum requirements:

Component	Minimum	Recommended
CPU	Pentium III (800 MHz)	Pentium IV or higher
Operating System	Windows 2000/XP	Windows 2000 SP4, Win XP Home/Pro SP1 or later
Internet Browser †	MS Internet Explorer 6	MS I.E. 6 or above
Memory (RAM)	128 MB	512 MB or higher
Hard Drive	8 GB	20 GB or higher
Free Disk Space	500 MB	750 MB
Monitor	15" for on-screen digitizing	15" or larger for on-screen digitizing
Graphics Card	High Color (16-bit) or higher	32 MB or higher (non-integrated)
Screen Resolution	1024 x 768 pixels	1280 x 1024 pixels
CD-ROM Drive	24x	Any late model drive
Machine Connection	Available serial or USB port for connection to the sewing machine	
Scanner, Printer, Plotter Connection	Any Windows-compatible connection method – e.g. parallel, USB	
Dongle Connection	Dedicated USB port	Dedicated USB port
Mouse	Serial, PS/2 or USB mouse PS/2 or USB mouse	
Sound Card	Not required	Recommended for training material

† Internet connection required by certain parts of the system as well as for access to product information and online support.

Updating Microsoft Internet Explorer and Adobe Acrobat Reader

As well as the Digitizer EX software itself, you will require recent versions of Microsoft Internet Explorer and Adobe Acrobat Reader to be installed on your system. Internet Explorer is required for the correct operation of the Design Gallery part of the software, while Adobe Acrobat Reader is used to read, search and print your online documents. You will be prompted to install Microsoft Internet Explorer V6 and Adobe Acrobat Reader V6 if necessary as part of the normal installation.



Warning Windows 2000 or XP users – if you are operating under one of these operating systems, you need to log on with Administrator level rights in order to install the software.

System security

Digitizer EX is controlled by a security device or 'dongle' attached to the computer. The software will **not** work properly if the dongle is unplugged from the computer while Digitizer EX is open. In the event, the application may hang or crash and any open files may be corrupted.



Digitizer EX Full Kit is shipped with a USB security dongle. Each dongle has a unique serial number and identity code so your system can be uniquely recognized. The security device plugs into a USB port on your computer. If your computer does not have a USB port, you will need to install a USB card. Parallel port dongles are no longer supported.



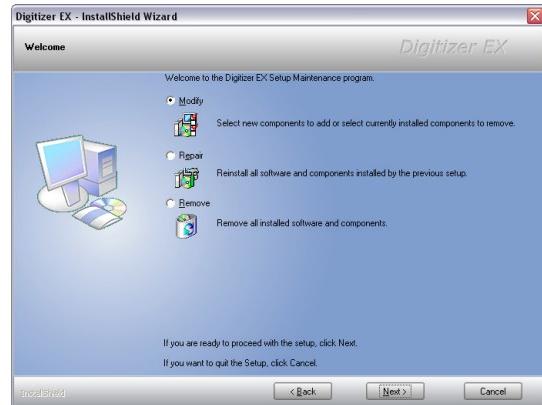
Warning The dongle is the most important and valuable part of your system and should be treated with care. Always store it in a safe place when not in use. The dongle is guaranteed against defects in material and workmanship – under normal use and service when properly installed – for a period of 90 days from the date of delivery. If it is faulty, it may be exchanged. If it is physically damaged, return it to your distributor and a replacement can be purchased. However, in case of loss or theft, you will need to purchase an entire Digitizer EX replacement system. For this reason, you should consider insuring your dongle.

Modifying an existing Digitizer EX installation

Whether you are updating your **current** Digitizer EX software or wanting to uninstall it, you follow the same procedure. When you run the installation program again, it will automatically detect if there is an existing copy of Digitizer EX on your system and give you to option to modify, repair or remove it.

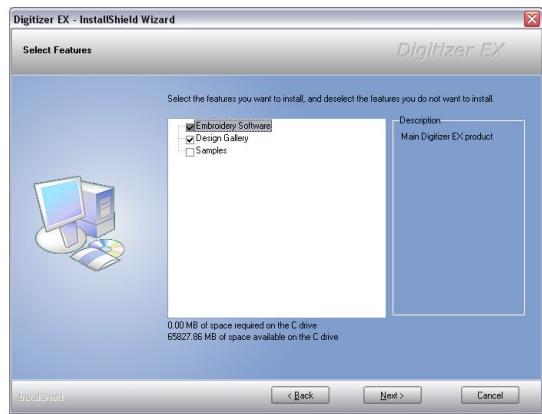
To modify an existing Digitizer EX installation

- 1 Close all Windows programs but leave Windows running.
- 2 Insert the Digitizer EX Installation CD-ROM. If Digitizer EX software is already installed on the computer, the following Welcome screen will appear.



- 3 Choose the option you require – Modify, Repair, Remove – and click **Next**.

If you choose to modify or repair your current installation, the **Select Components** screen will appear.



- 4 Select the components to install or remove:

Component	Description
Digitizer EX	Main Digitizer EX product.
Design Gallery	The Design Gallery design browser application.
Online Help	Context-sensitive help – to invoke, use the F1 function key or click Help in the dialog boxes.
User Manual	An electronic (online) copy of this Instruction Book – accessible via the Help menu.
Samples	Sample embroidery designs and images – installed to the Embroidery Album folder on your hard drive.
Release Notes	An electronic (online) copy of the Release Notes – accessible via the Help menu.
Extra Languages	In the multilingual version, extra languages are available. If online documents are available in the same language(s) you select here – e.g. Japanese – these will be installed automatically. If documents are not available in your selected languages, English documents will be installed. After installation, you can switch between languages using the Switch Language utility in the Program folder.



Note Total available space is automatically detected and displayed. This updates automatically depending on items selected.

5 Click Next.

The Ready to Install screen appears.

6 Click Install.

Upon successful installation of the software and any additional Windows files that need updating, the Installation Complete screen appears.

7 Click Finish.

Connecting to your machine

Once you have successfully installed and tested your Digitizer EX software, you can attach your machine to your computer. To connect supported machines to a PC, you need to use a USB cable connected to your PC USB port. See your machine manual for details on connecting to computer.

Supported machine models and memory cards

Digitizer EX gives you the option of sending designs directly to machine or to memory card. The option you choose depends, in part, on the machine you are using.



Note Before design files are sent to machine, they are automatically converted to JEF stitch file format.

Supported machine models

With both EasyDesign and EasyEdit, Digitizer EX is able to automatically detect which type of supported machine is currently connected to the PC USB port. The **Machine** menu items are determined by the type of machine connected to the PC. If no machine is detected, all menu items will be grayed out. Your distributor will advise you about supported machine types. See also [Sending designs to machine](#).

Supported memory cards

Besides USB connection, you can write to ATA PC card – ‘Flash Memory’ – in a similar way as you would save to floppy disk. The ATA PC card is a PCMCIA standard PC memory card that is used for storing designs in JEF format to be read/written from/to machine. The ATA PC card is designated as a drive in your computer. The drive designation may become E: or F: or some other letter. After writing your design, you simply insert the card into the ATA PC card slot of your machine (if supported), and read the design.



Note If your computer is a laptop, there is a slot where you can insert the ATA PC card and its adapter directly. If you have desktop computer, you will need an ATA PC card reader/writer connected to a USB port.

USB memory sticks

The latest machine models can read from and write to USB memory sticks. These are very convenient portable memory devices which can hold large amounts of data in a small ‘stick’.

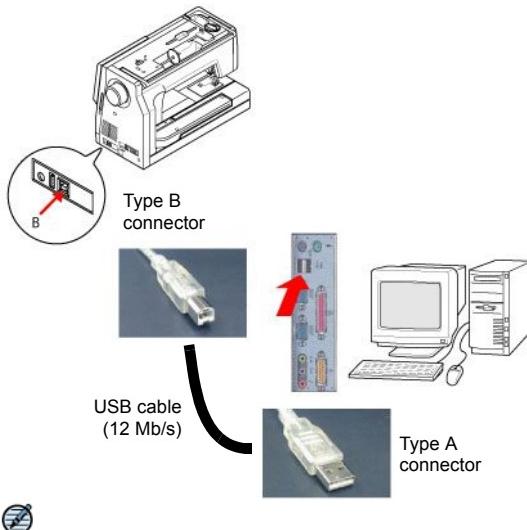
Linking your PC by USB cable

All the supported Windows operating systems support the use of a USB cable to connect a

supported machine directly to your PC, provided your PC has a USB port installed.

To link your PC by USB cable

- 1 Turn on your PC and sewing machine.
- 2 Connect the Type A connector to the PC and the Type B connector to the sewing machine.



Note Do not turn the PC or sewing machine off before setup is complete.

- 3 Install the USB driver for the sewing machine.



Note This setup procedure is only necessary on first usage. The cable can be disconnected with the power on or off.

Installing USB drivers for direct connection

The USB drivers for 2000/XP are included on your Digitizer EX Installation CD. You need to install them when connecting your machine to PC. The Hardware Wizard automatically searches for the correct drivers and guides you through the process.

To install a USB driver for direct connection

- 1 Connect your machine to the computer with the USB cable and turn both on.

The computer will search for new hardware and prompt you to install a device driver.



- 2 Select **No** to the Windows Update and click **Next**.



- 3 Select the automatic installation options, insert your installation CD into the CD ROM drive, and click **Next**. The installation will search for a suitable device driver and prompt you to choose if it finds more than one copy on your system.



Note The MC11000 (Jsmc860 Device) drivers are copied to the hard drive when the software is installed and don't actually require the installation CD. The MC10001 machine requires the installation CD while the Wizard is running in order for the (Jsmc850 Device) drivers to be installed.

- 4 Choose an option and click **Next** to start installing.
The following dialog appears when installation is complete.



- 5 Click **Finish** to close and restart your computer.



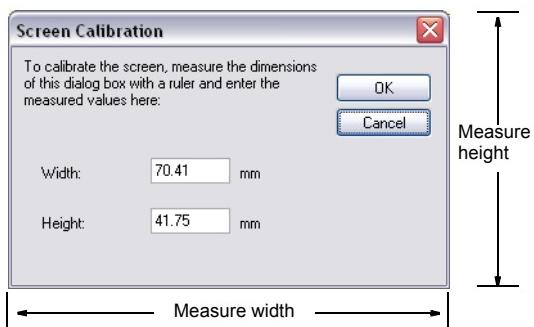
Note If you have trouble with scanning after re-starting Digitizer EX, there may be a conflict with previously installed scanner drivers. Re-install Digitizer EX and test the scanner. If the selected scanner driver does not work in Digitizer EX, select another scanner driver from the list. There are usually two installed for each scanner.

Calibrating the monitor

You need to calibrate your monitor so that designs at 1:1 scale appear at real size. Do this when you first install EasyDesign or whenever you change your monitor.

To calibrate the monitor

- Select **Setup > Screen Calibration**.
The **Screen Calibration** dialog opens.



- Measure the height and width of the dialog box.
- Enter the measurement in the **Width** and **Height** fields.
- Click **OK** to confirm.

Setting up scanners

Use Scanner Setup (Image menu) to setup scanners.

Digitizer EX supports TWAIN-compatible scanners.

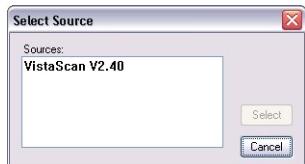


Note Peripheral devices can be connected to your computer via serial ports, parallel ports, a specialized network card or an ethernet network.

To set up scanners

- Connect the scanner using the accompanying instructions.
- Set it up in Windows using the accompanying instructions and/or the Microsoft Windows documentation.
- Start Digitizer EX.
- Select **Image > Scanner Setup**.

The **Select Source** dialog opens displaying a list of scanner drivers loaded on your computer.

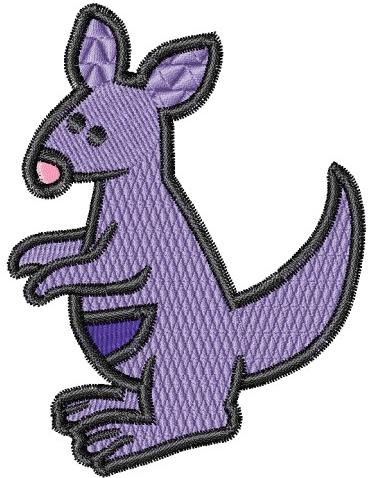


- 5 Select the scanning driver to use, then click **Select**.

Chapter 2

INTRODUCTION

Welcome to Digitizer EX, the leading software application for home embroidery use. Digitizer EX software is a Windows-based product incorporating many of the conventions with which most PC users are already familiar.



If you are new to Digitizer EX, you'll be pleased with its flexible digitizing capabilities, the ease with which you can create and edit designs, and how simple it is to add or create your own lettering. However, before you begin working with the product, read the [Introduction to Embroidery Digitizing](#). This chapter presents an overview of the basic concepts of digitizing with Digitizer EX and provides you with important guidelines on how to use this software to achieve the best results.

You should also familiarize yourself with [Basic Procedures](#). Here you will learn how to start the application, create or open a design, print designs, and how to use some of the essential tools and features that Digitizer EX provides.



Note Use the procedure outlined in the **System Setup** chapter to install Digitizer EX software on your computer as new.

About Digitizer EX

There are two products within the software: EasyDesign and EasyEdit. These are described below.

EasyDesign

EasyDesign uses an 'object-oriented' approach to embroidery design, by saving shapes as outlines that can generate stitches automatically, based on preset object details. Embroidery objects can be resized, reshaped and transformed as individual elements within a single design, with stitches re-generating automatically after every change.

EasyDesign lets you create new designs from scratch, combine existing designs and quickly convert bitmap images into a design. It also provides a range of fonts and lettering features for adding monograms and creative lettering to your designs. With EasyDesign you can:

- Create a new design
- Create embroidery objects using the digitizing tools
- Automatically create embroidery objects using the Click-to-Design and Click-to-Stitch
- Use the image preparation tools to prepare bitmap images ready for use as templates
- Add lettering and create monograms, using different fonts and creative effects
- Insert or scan in an image to 'trace' a new design
- Resize, reshape, mirror and rotate individual objects in the design
- Travel through the design to view the stitching sequence
- View or print out information sheets about your design, detailing the number of stitches and colors it uses
- Create special effects, such as appliqu , objects with holes and feathered edging
- Select different stitch types to fill or outline a shape
- Set up and change object values
- Vary the angle of stitching
- Change the stitching sequence
- Split the stitch blocks to separate parts of a design
- Load and view designs from your hard disk, CD-ROM or floppy disk. These can be designs from another embroidery software package
- Save files in a number of file formats, including the standard JAN format.

EasyEdit

EasyEdit is based on the traditional embroidery format, where an entire design is a single object, made up of individual stitches. EasyEdit lets you

take a stitch-based design, and resize or transform it as a whole, or modify individual stitches for subtle changes and fine-tuning. With EasyEdit you can:

- Open an existing design
- Select and edit individual stitches
- Split the stitch blocks to separate parts of a design
- Cut, copy, duplicate and paste stitch blocks
- Resize, mirror and rotate stitch blocks
- Travel through the design to view stitching sequence
- Load and view designs from your hard disk, CD-ROM or floppy disk. These can be designs from another embroidery software package
- Save files in a number of file formats, including the standard JEF format.

Online information

Online documentation is provided in two formats – HTML Online Help and Adobe Acrobat.

Online Manual

The Instruction Book (Online Manual) is also included as part of the software installation and can be accessed via the Help menu.

Online Help

Online Help provides quick access to general information on EasyDesign and EasyEdit features and step-by-step instructions.

Viewing online information

Online documentation can be accessed from the Digitizer EX Programs folder or from the Help menu in Digitizer EX. You can read it with Adobe Acrobat™ Reader which is supplied with your Digitizer EX software installation. Quickly search for the information you need using standard Adobe Acrobat™ Reader features.

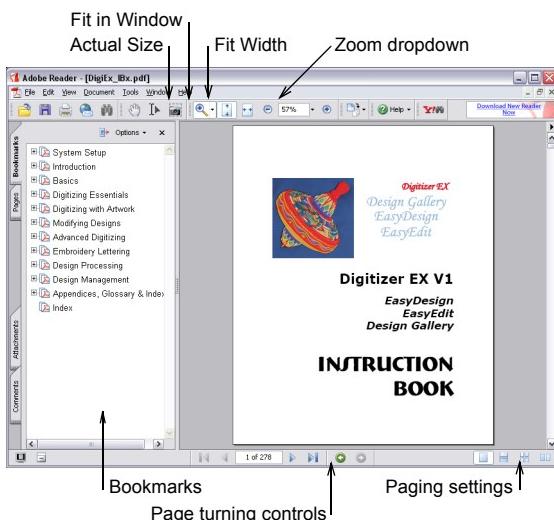
To view information online

- 1 From Windows Start, go to the **Programs > Digitizer EX** folder.

You will find the following online document:

- Digitizer EX Instruction Book

- 2 Double-click the required document to open it in Adobe Reader.



Try this! You can open your online documentation directly from Digitizer EX. Go to the Help menu and select the document you want from the dropdown list.

- 3 Select the topic you want by clicking on its 'Bookmark'.
4 Change the view magnification in any of the following ways:

- Click the **Actual Size**, or **Fit in Window**, or **Fit Width** buttons.
- Select the **Zoom In** tool, then click anywhere on the page – each click increases the magnification.
- Click the **Reader Zoom** dropdown and select a setting – try 200% if you want to look closely at screen diagrams.

- 5 Use the page turning controls at the bottom of the window to scroll backwards and forwards through the book or return to previous views.



Try this! For comprehensive information about using the application, refer to the Adobe Reader **Help** menu.

Using online help

Online Help can be accessed from the Help menu in Digitizer EX.

To use the online help

- 1 Select **Help > Help Topics**.
The EasyDesign Help window opens.
- 2 Click **Contents** to display the main list of topics.

Topics are grouped under high-level headings with 'book' icons.

- 3 Double-click a book to view the list of topics, then double-click a topic.
Alternatively, click **Find** and enter keywords to search on a specific subject.

Conventions used in the manual

This manual adopts the following conventions:

Commands

Commands on a submenu are referred to by both the submenu and command name. For example the Select All command in the Edit menu is referred to as **Edit > Select All**.

Dialog boxes

Dialog boxes are referred to as 'dialogs' and are shown in the manual only if they provide important information on using Digitizer EX. The screen images provided are intended to be representations, not exact duplicates of the layouts generated by the software.

Mouse conventions

Instruction	Symbol	Action
Click		Click the left mouse button.
Right-click		Click the right mouse button.
Double-click		Click the mouse button twice without moving the mouse.
Shift-click	+	Hold down Shift and click a mouse button.
Click OK	or	Click OK with the mouse or press the Enter key on the keyboard to complete the action.

Keyboard conventions

Shortcut	Description
Ctrl + S	While holding down the Control key (Ctrl), press the lowercase letter S key.
Ctrl + Shift + H	While holding down the Control key (Ctrl), press Shift and the H key.

For a complete list of keyboard shortcuts, refer to the Quick Reference Guide.

Part I

Basics

Designs created in EasyDesign are composed of ‘embroidery objects’. They are called ‘objects’ because they are discrete entities which can be manipulated independently of each other. Each object has certain defining characteristics or ‘properties’ such as color, size, position, and so on. The most important property of an embroidery object is its stitch type.

Basic procedures

This section describes how to start Digitizer EX EasyDesign and Digitizer EX EasyEdit, how to open designs, start new ones and use the basic commands. It also explains how to turn on and off the grid and hoop and measure distances on-screen. You will also find out how to save designs. See [Basic Procedures](#) for details.

Viewing designs

This section explains the design viewing modes available in Digitizer EX as well as the various design viewing settings. It describes how to view the stitching sequence in both EasyDesign and EasyEdit, and how to view the stitching sequence in slow motion. Access to design information is described, as well as viewing and hiding images. See [Viewing Designs](#) for details.

Selecting objects

This section describes how to select objects using the selection tools and keyboard. It shows how to select while traveling through the design and how to select objects of a specific color. You can also select individual stitches in EasyEdit. See [Selecting Objects](#) for details.

Grids and hoops

This section describes how to set grid spacing in Digitizer EX. It also covers changing hoops and defining your own custom hoops. It explains splitting designs on an MA Hoop when sending to machine as well as changing hoop backgrounds. See [Grids and Hoops](#) for details.

Chapter 3

INTRODUCTION TO EMBROIDERY DIGITIZING

Digitizer EX provides embroiderers with a fast, flexible way of creating and editing embroidery designs. This section provides an overview of the embroidery digitizing process as it applies to Digitizer EX.

Planning designs

Good embroidery quality starts with good design. You then need a good quality machine to stitch it out. But then you need to use the correct fabric, threads, backings, tensions, and so on. Keep the following points in mind.

Design looks good – shapes, colors, balance



Details are clearly defined

Stitches are angled to match shapes

Curly

Stitches are neat, smooth and even

Shapes are filled with correct fill and outline stitches

Lettering is clear and easy to read

Shapes are stitched correctly – no unwanted gaps

The stitched-out design should also have the following characteristics:

- The design stitches out efficiently on the machine.
- The fabric has not puckered around the stitched areas.
- The design is free of loose ends.

Artwork

Artwork in both 'bitmap' and 'vector' formats can be inserted, pasted or scanned into EasyDesign for use as digitizing templates or 'backdrops'. Unless you are an experienced digitizer, do not use artwork which is complicated. Possible sources for suitable artwork include:

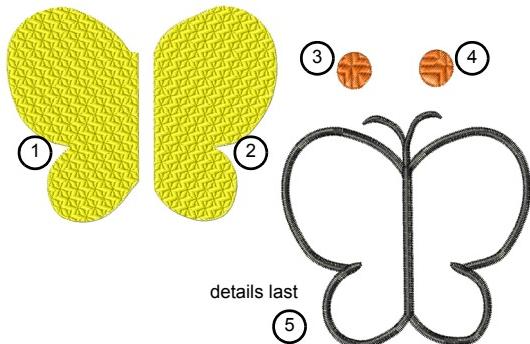
- books of embroidery patterns and children's story books
- printed table cloths or tea towels
- business cards, post cards and wrapping paper
- clip art libraries of your word processing or graphics program
- Internet or CD clipart libraries
- samples in the EasyDesign C:\Embroidery Gallery folder
- original artwork – e.g. children's drawings.



Try this! Be sure to check the copyright for any images you do not create yourself. If unsure, contact the company and seek permission to use.

Design shapes and stitching sequence

Before digitizing, you need to analyze and plan design shapes and stitching sequence carefully. Design shapes need to be clearly defined to make them easy to embroider. The best shapes have relatively constant width, with smooth edges, no sharp turns and no small, protruding details. The design sequence defines the stitching sequence, or order in which shapes are stitched out. Of course you can always change the sequence to improve the stitchout – for example, to minimize color changes. Details should be stitched last.



Digitizing embroidery

Designs created in EasyDesign are composed of 'embroidery objects'. They are called 'objects' because they are discrete entities which can be manipulated independently of each other. Each object has certain defining characteristics or 'properties' such as color, size, position, and so on. The most important property of an embroidery object is its stitch type.

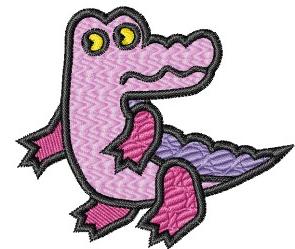
Digitizing consists of turning the basic shapes of a design into embroidery objects. Different tools are suited to different shapes. You can digitize them manually by marking reference points along an outline, or by using 'smart' tools which transform shapes automatically into embroidery objects.

Stitches are automatically calculated from design outlines and properties. They are regenerated whenever you press **Enter**. This means you can

scale, transform and reshape Digitizer EX designs without affecting stitch density or quality.

Selecting objects

Digitizer EX EasyDesign provides various ways to select the objects that comprise an embroidery design. You can select all objects to modify the design as a whole, or individual objects for more precise modification. See [Selecting Objects](#) for details.



Viewing designs

EasyDesign provides numerous ways to view an embroidery design. You can show or hide needle penetration points and connectors. Zoom in on an area to see more design detail or even individual stitches. Pan across a design to view parts that are not currently visible and use the Overview Window to view a thumbnail of the design. See [Design viewing modes](#) for details.



Normal view



Vizualizer

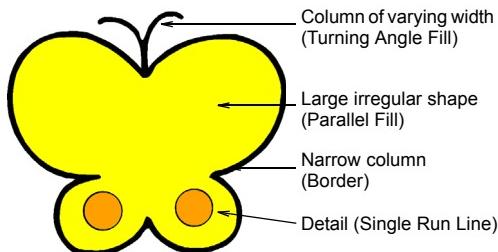
Use grid lines to help accurately align or size embroidery objects. You can show or hide the grid. See [Displaying the grid](#) for details.

View completed designs in Vizualizer. View the stitching sequence by 'traveling' through your design by stitches, colors or objects. See [Traveling through the stitching sequence in EasyDesign](#) for details.

Input methods

Depending on the shape and stitching you require, you use a different 'input method' or 'tool' to enter 'reference points'. Input methods determine whether stitching is an outline, a column of curving

stitches, or a fill of parallel stitches. Methods in EasyDesign include **Single Run Line**, **Turning Angle Fill**, **Border**, and **Parallel Fill**.



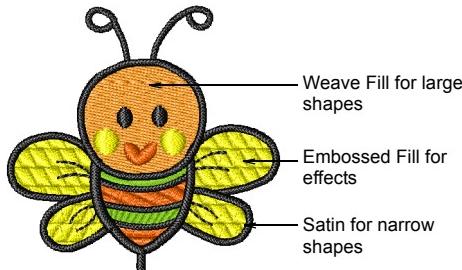
Use the **Single Run Line** tool to digitize lines of single or triple run stitching. **Single Run Line** places a single row of run stitches along a digitized line. **Triple Single Run Line** repeats each stitch three (or more) times for a thicker line. See [Digitizing lines](#) for details.

Use **Turning Angle Fill** to digitize columns of varying width and stitch angle. Digitized pairs of reference points define the outline, while lines connecting the pairs define the stitch angles. See [Digitizing columns of varying width](#) for details.

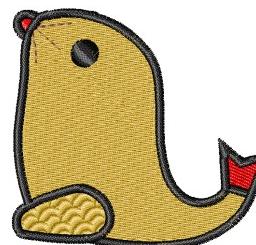
Use **Border** to digitize columns of constant width. It is typically used for digitizing borders and outlines of larger shapes. You can digitize columns to create thick lines or borders. **Border** is typically used with Satin stitch. Use the **Parallel Fill** tool to digitize large and irregular shapes. Most shapes can be digitized with this tool. By digitizing boundaries within Parallel Fill objects, you can create filled objects with holes. See [Digitizing complex shapes with fixed stitch angles](#) for details.

Stitch types

There are three basic stitch types available with embroidery machines – **Single Run Line**, **Satin** and **Weave Fill**. Everything else is a variant of these. The stitch type you use depends on the object shape, size and the effect you want to achieve. See [Fill Stitches](#) for details.



Satin stitch creates a glossy, high-quality effect. It is well suited to stitching narrow shapes or 'columns', where each stitch traverses the width of the column. See [Creating Satin fills](#) for details.



Weave Fill stitch consists of rows of run stitches and is suitable for filling large, irregular shapes. You can select from many attractive Weave Fill patterns. Generally the default size and spacing will produce the best results, but you may like

to change the stitch angle. See [Creating Weave fills](#) for details.

Embossed Fill is a decorative fill stitch in which the needle penetrations form a tiled pattern. Select from a wide variety of available patterns. See [Creating Embossed fills](#) for details.

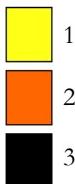
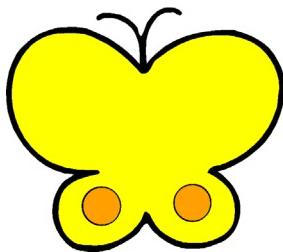


 **Note** In EasyDesign, use the Single Run Line method to digitize lines of single run stitching. Single Run Line is both a stitch type and an 'input method'. See [Digitizing lines](#) for details.

Thread colors and thread charts

When you digitize, you select thread colors for each object you create from the Color Chart. New objects are digitized using the selected color. Digitizer EX lets you manage the thread colors in your Color Chart. Select from a wide range of commercial thread charts. In Digitizer EX, you can set the color inside the hoop to match the color of

the fabric you intend to stitch out on. Background colors are treated as design details and are saved with the design. See [Thread Colors](#) for details.

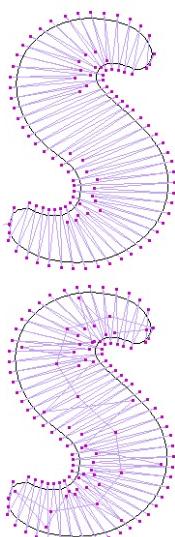


You need to decide how many different thread colors to use and the sequence in which they will be stitched. When you digitize, you select thread colors from the color palette. Wherever possible, simplify the design to reduce the number of color changes. Always start with the shapes at the back and work your way forward, layer by layer.

Improving stitch quality

Embroidery appearance and quality depends a lot on underlay which serves as a foundation for the cover stitching. Without an underlay, embroidery lies flat on the underlying fabric which can often show through. New digitizers might be tempted to increase stitch density but it is much more effective to apply an underlay. Although it increases the stitch count, underlay helps to stabilize fabrics and reduce puckering and pulling especially on larger designs. It also provides 'loft', raising cover stitches and preventing them from sinking into soft fabrics. It can also prepare a napped fabric by flattening it. See [Strengthening and stabilizing with underlays](#) for details.

Embroidery stitches pull fabric inward where the needle penetrates. This can cause fabric to pucker, and gaps to appear in the embroidery. For an object to sew out correctly, it must have correct



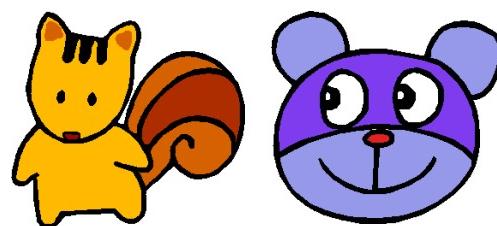
stitch spacing, sufficient pull compensation together with a suitable underlay for the combination of cover stitch type, object type, object shape and fabric. Digitizer EX provides a set of optimized fabric settings so that the software will take into account the type of fabric you are stitching on. See [Working with fabrics](#) for details.

Digitizing with artwork

There are two broad categories of artwork file, both of which can be imported into EasyDesign for use as digitizing backdrops:

- **Bitmap images:** These consist of colored dots or pixels. When you zoom in on a small area, the outlines become jagged and appear as a series of pixels.
- **Vector images:** These consist of outlines which may be colored and may have colored fills. Vector images are automatically converted into bitmap images when they are imported into EasyDesign.

To create good quality embroidery, you need to choose suitable artwork of either format. For both manual and automatic digitizing purposes, 'clean' artwork with a limited number of solid colors and well-defined outlines work best.



Bitmap image scaled and background removed – ready for manual digitizing

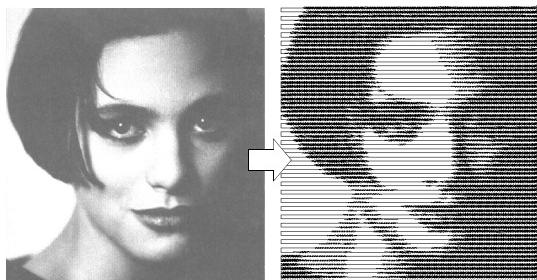
Areas recolored and outlines improved – ready for automatic digitizing

Artwork that is not in digital format needs to be scanned correctly to produce good quality images. Before using bitmaps for automatic digitizing, you must prepare them using the EasyDesign artwork preparation tools. See [Using image preparation tools](#) for details.

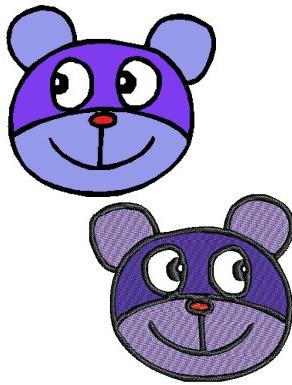
Automatic digitizing

The **Click-to-Stitch** tools are useful for quickly creating embroidery objects from images that do not require particular artistic effects or embroidery-specific knowledge. This in turn frees you to spend more time on the artistic or inherently complicated areas of your designs. See [Digitizing images with Click-to-Stitch](#) for details.

Click-to-Design automatically converts artwork to fully digitized embroidery with little or no intervention. Various forms of artwork can be used – both bitmap and vector – and various levels of user ‘assists’ applied to the process. See [Digitizing images automatically with Click-to-Design](#) for details.



Use **Photo Click** to create embroidery from photographs or other images, color or grayscale. Photo Click designs consist of rows of stitches of varying spacing. The effect resembles the output of a line printer. See [Creating embroidery from photographs](#) for details.



Modifying designs

When you have digitized your design you can modify it as a whole, edit individual objects or even individual stitches. EasyDesign lets you add to designs quickly by duplicating and copying existing objects. It also lets you combine designs by inserting the contents of one file into another. See [Combining objects and designs](#) for details.



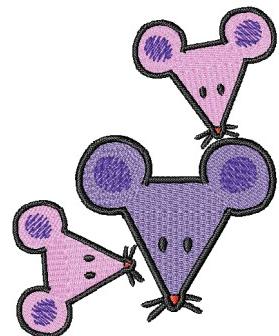
Note Before modifying any design, a good practice is to save a copy under a new name and keep the original in case you want to discard your changes and start again.

Stitching sequence usually occurs in the order in which the design was digitized. However, you can change this by a variety of methods. The **Resequence** dialog provides a sequential list of objects grouped by object or color. It provides an easy way to resequence selected objects and color blocks. See [Resequencing embroidery objects](#) for details.



Arranging and transforming objects

You can change the position, size and orientation of objects in a design by moving, scaling and transforming them. Group objects together to apply a change to them all at once, or lock them to avoid unintentional modification. You can modify objects directly on-screen or by changing



their settings. You can also access some of these functions using the popup menu. See [Arranging and Transforming Objects](#) for details.



Note The scalability and stitching quality of a design ultimately depend on its original source. Only native JAN designs contain the complete set of design information required for 100% perfect scaling and transformation. See [Embroidery design formats](#) for details.

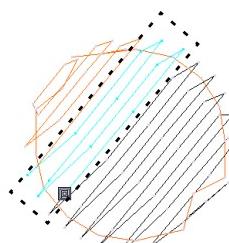
Reshaping and editing objects

Digitizer EX lets you modify object shapes by means of control points. These vary slightly with the object type. For some objects, you can also change control points from corner points to curves. Stitch angle lines and entry and exit markers all appear around selected objects. Stitch angle adjustments depend on the type of object you are working with. With some objects you can set a stitch angle for the entire object. With others, you can adjust the turning stitch angles. You can also change the stitch entry and exit points of individual objects. This is useful in order to reduce the number of travel runs connecting adjoining objects. See [Reshaping and Editing Objects](#) for details.



Editing stitches

With Digitizer EX EasyDesign stitches are automatically generated from design outlines and properties. This means you can scale, transform and reshape Digitizer EX designs without affecting stitch density or quality.



The Digitizer EX EasyEdit application allows you to work with traditional stitch-based designs in the SEW or JEF format. Using EasyEdit, you can fine-tune your designs without having to convert them into JAN format. EasyEdit lets you edit individual stitches. You simply select them like any other object and move

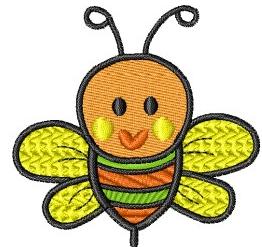
the needlepoint position as required. You may need to do this particularly when working with 'stitch' files which do not contain design outline data. See [Stitch Editing](#) for details.

Advanced digitizing

For the experienced embroidery digitizer, Digitizer EX provides a range of advanced digitizing features to improve the look of your embroidery as well as cater for different styles of embroidery.

Object details and templates

Embroidery objects details include general characteristics such as size and position, as well as embroidery-specific characteristics such as stitch type and density. The particular stitch settings determine how stitches will be regenerated when you reshape, transform or scale an object.



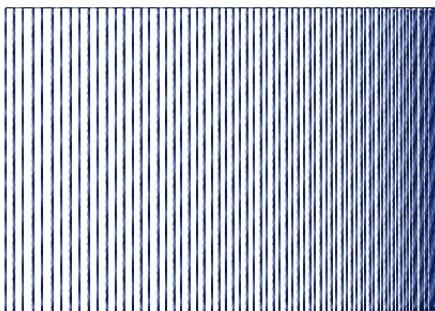
When you start a new design, Digitizer EX uses the default settings or 'values' stored in the template. Most designs use the 'Normal' template, but you can create and use your own. In fact you can save any combination of settings in a template, such as favorite stitch or lettering settings. See [Object Details and Templates](#) for details.

Advanced digitizing techniques

Digitizer EX provides specialized digitizing features to enhance your embroidery. Use the **Cut Hole** tool to cut holes in objects in order to prevent a build-up of stitch layers where they are not needed. The **Fill Holes** function fills holes in selected Parallel Fill objects either by removing them altogether or by creating new objects based on the holes in the original object. See [Advanced Digitizing Techniques](#) for details.



Use **Feather Edge** to create rough edges, to create shading effects, or to imitate fur or other fluffy textures in your design. **Gradient Fill** is an artistic stitch effect that gradually varies the stitch spacing between dense and open fill along an embroidery object. It allows you to easily create different shading and color effects. See [Creating gradient fill effects](#) for details.

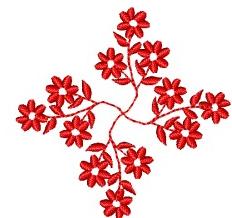


In Digitizer EX, the **Travel on Edge** effect is typically used in combination with open Weave Fill stitching to fill backgrounds or for shading effects. Automatically create all the stitching you need for appliquéd using the **Appliquéd** digitizing method. Up to three layers of stitching – guideline, tack and cover – are generated, depending on current settings. See [Digitizing appliquéd](#) for details.



Embroidery stamps and motifs

Embroidery Stamps are pre-defined design elements, such as hearts, leaves or border patterns. They generally consist of one or more simple objects made up of Run and/or Satin stitches. You use Embroidery Stamps on their own as decorative elements. Digitizer EX also provides a library of embroidery motifs which can be linked together to create ornamental runs and fills. Stamps are generally much larger than the motifs used in Motif Runs and Motif Fills and contain Satin stitches, not just Run stitches. See [Embroidery Stamps and Motifs](#) for details.



Embroidery lettering

Digitizer EX provides various techniques for adding lettering to designs quickly and easily using the built-in library of embroidery fonts or by converting any TrueType Font installed on your system. Apply formatting to lettering objects in the same way as a word processor, including italics.



Curly

Orientation determines the shape of lettering objects in a design. You can place lettering on a straight horizontal or vertical baseline, curve lettering around a circle or arc baseline, or digitize your own. Digitizer EX gives you interactive control over many baseline settings. Letter and line spacings can be determined before or after creating lettering objects and placing them in your design. See [Lettering Essentials](#) for details.



object.

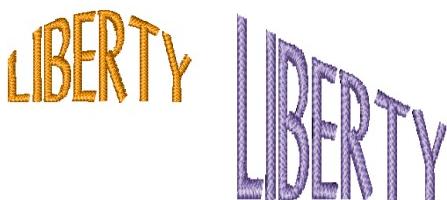
Digitizer EX gives you interactive and precise numeric control over many settings affecting lettering objects. You can adjust lettering objects as a group as well as the individual letters comprising a lettering

When you first create lettering, it may be too big or too small. Size can be adjusted both interactively and via settings. Apart from scaling, you can interactively skew and rotate lettering objects. Lettering orientation too can be adjusted on-screen after it has been placed in your design. See [Lettering Editing](#) for details.

Like all embroidery objects, each lettering object has its own properties. Before you create a lettering object, you may want to adjust the settings for the stitch type you are going to use. Alternatively you may want to change the stitch settings and effects applying to existing objects. See [Applying different stitch types to lettering objects](#) for details.

In addition to its built-in library of embroidery alphabets, Digitizer EX allows for the conversion of any TrueType font installed on your system to an embroidery alphabet. The result is similar to embroidery alphabets although the quality may not be quite as high. See [Converting TrueType fonts to embroidery](#) for details.

Add decorative borders such as rectangles, ovals, and shields to designs. When you add a border, it is automatically sized to fit the current design. Apply Lettering Art effects to lettering objects to make them bulge or arch, stretch or compress. See [Creating special effects with Lettering Art](#) for details.



Output, storage and design management

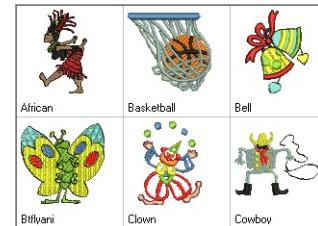
You can output embroidery designs in a variety of ways – saving to disk or sending directly to machine for stitching. Designers frequently want

to distribute their designs so that they can be seen in real colors, in Vizualizer or otherwise. In EasyDesign you can save both design images and production worksheets to disk or email them. See [Reading and Writing Design Files](#) for details.

By default EasyDesign saves to its native file format, JAN. This format contains all information necessary both for stitching a design and for later modification. Saving a design records its file name, location and format, and updates it with any changes you make. JAN format files are automatically compressed to reduce storage, making it possible to save large files.

Design gallery

Design Gallery provides an efficient way for managing embroidery designs. This design management tool can access design files stored on your computer hard disk, CD-ROM, or floppy disk. It recognizes all design file formats used by EasyDesign. See [Design Management](#) for details.



Chapter 4

BASIC PROCEDURES

To start using Digitizer EX, you need to know basic procedures, such as starting up, opening and creating designs, and saving. Other basic procedures include showing and hiding the grid, displaying and using toolbars.

This section describes how to start Digitizer EX EasyDesign and Digitizer EX EasyEdit, how to open designs, start new ones and use the basic commands. It also explains how to turn on and off the grid and hoop and measure distances on-screen. You will also find out how to save designs.

Starting Digitizer EX

Digitizer EX is made up of two separate applications – EasyDesign and EasyEdit – both launched from your Windows desktop. EasyDesign is used for creating designs while EasyEdit is used for modifying existing designs.



Note You can only open EasyDesign or EasyEdit – you cannot open both at the same time.



Warning If the security device is removed or loses connection while you are working in Digitizer EX, error messages will display. Cancel the messages,

then exit Digitizer EX. You will lose any unsaved changes to your design. Re-attach the security device to your computer, making sure that it is firmly secured, then restart Digitizer EX.

Starting Digitizer EX EasyDesign



Double-click to start EasyDesign.

Open Digitizer EX EasyDesign using the desktop icon or the Windows Start menu.



To start Digitizer EX EasyDesign

- 1 Double-click the Digitizer EX EasyDesign shortcut icon on the Windows desktop.

Alternatively, select **Programs > Digitizer EX > EasyDesign** from the **Start** menu.

The **Getting Started** dialog opens.



- 2 Choose the option which best suits your requirements:

- ◆ Open an existing design: Use this option if you have an existing design or want to use one of the packaged designs. See also [Opening designs in EasyDesign](#).
- ◆ Digitize an existing image: Use this option if you have electronic artwork which you want to use as a basis for a new design. See [Digitizing with Backdrops](#) for details.
- ◆ Free-hand digitize: Use this option if you want to create a new design using the available digitizing tools within Digitizer EX.

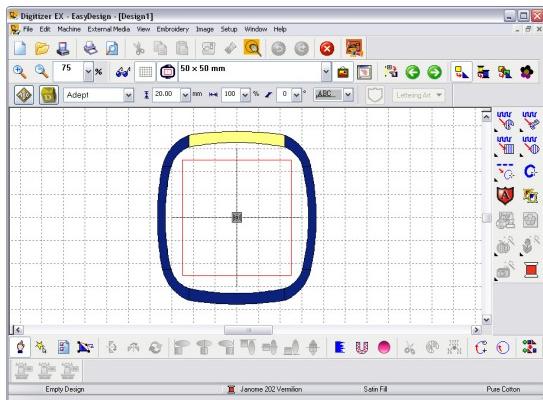
If you select one of the second two options, the **Choose Fabric** dialog opens.



- 3 Choose from a set of pre-defined fabrics.

Digitizer EX provides a set of optimized fabric settings so that the software will take into account the type of fabric you are stitching on. See also [Working with fabrics](#).

If you select to free-hand digitize, EasyDesign opens with a new, blank design (Design1).



- 4 Customize the design window by showing or hiding the grid, changing the grid dimensions, and showing and hiding toolbars. See [Displaying the grid](#) and [Showing or hiding toolbars](#) for details.

Starting Digitizer EX EasyEdit



Double-click to start EasyEdit.

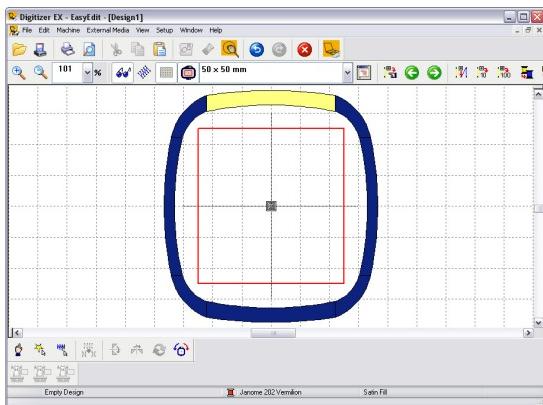
Open Digitizer EX EasyEdit using the desktop icon or the Windows Start menu.

To start Digitizer EX EasyEdit

- ◆ Double-click the Digitizer EX EasyEdit shortcut icon on the Windows desktop.

Alternatively, select **Programs > Digitizer EX > EasyEdit** from the **Start** menu.

EasyEdit opens with a new, blank design (Design1).



- Customize the design window by showing or hiding the grid, changing the grid dimensions, and showing and hiding toolbars. See [Displaying the grid](#) and [Showing or hiding toolbars](#) for details.

Opening designs in EasyDesign

 Use Open (Standard toolbar) to open an existing design.

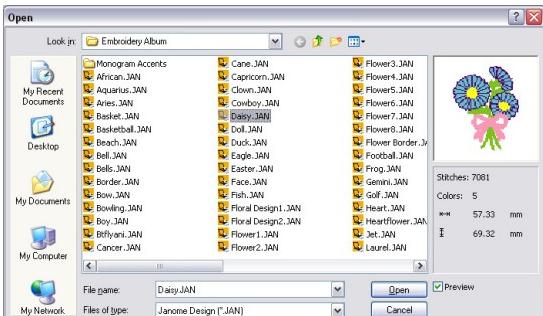
Digitizer EX EasyDesign opens JAN files. See [Embroidery design formats](#) for details.



Warning You cannot open files created with a later version of the software to the one you are running.

To open a design in EasyDesigns

- Click the Open icon.
The Open dialog opens.



- Select a folder from the Look In list.
- If the design is not in JAN format, select a file type from the Files of Type list.

- Select a design or designs.
 - To select a range of items, hold down **Shift** as you select.
 - To select multiple items, hold down **Ctrl** as you select.
- Select the **Preview** checkbox to preview the design (for supported file formats) together with design data. This includes stitch and color numbers, design height and width.



Try this! For more information about a selected file, right-click in Windows Explorer and select **Properties** from the popup menu.

- Click Open.

Opening designs in EasyEdit

 Use Open (Standard toolbar) to open an existing design.

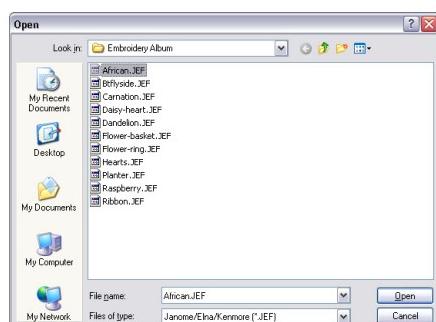
Digitizer EX EasyEdit opens JEF and SEW files. See [Embroidery design formats](#) for details.



Warning You cannot open files created with a later version of the software to the one you are running.

To open a design in EasyEdit

- Click the Open icon.
The Open dialog opens.



- Select a folder from the Look In list.
- If the design is not in JEF format, select a file type from the Files of Type list.
- Select a design or designs.
 - To select a range of items, hold down **Shift** as you select.
 - To select multiple items, hold down **Ctrl** as you select.

5 Click Open.

Switching between EasyDesign and EasyEdit

Digitizer EX allows you to quickly switch between the EasyDesign window and the Easy Edit window with a single click. EasyDesign-to-EasyEdit is accessed by clicking the **Switch to EasyEdit** icon located on the **Standard** toolbar in EasyDesign. The reverse is available on the **Standard** toolbar in EasyEdit. When switching, you are prompted to save any changes you have made.



Using commands

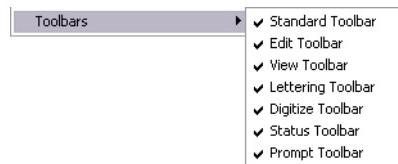
Once you start Digitizer EX, you use commands or tools, and dialogs to complete your tasks. You select commands in Digitizer EX in the same way as other Windows applications – from menus, toolbars, or popup menus. Keyboard shortcuts are also available for the most frequently used commands. See [Quick Reference](#) for details.

Selecting commands from toolbars

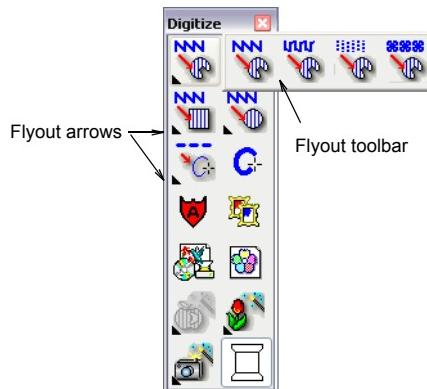
Toolbars provide quick and easy access to Digitizer EX commands. Some of these commands are also available from dropdown menus. Click a toolbar icon to activate a command. Digitizer EX provides 'flyout toolbars' from the **Digitize** toolbar in order to minimize crowding. Selecting a tool on the flyout toolbar causes it to become the active tool on the **Digitize** toolbar.

To select commands from toolbars

- Rest the pointer over a tool icon to see its name in a 'tooltip'.
- The following toolbars are available to you in Digitizer EX. See [Showing or hiding toolbars](#) for details.



- Click the icon to activate the command.
- Access flyouts on the **Digitize** toolbar by clicking the flyout arrow which appears in the bottom left corner of the tool. The flyout remains open until you select any enabled tool.



- To close the flyout without selecting anything, simply click anywhere outside it.

Showing or hiding toolbars

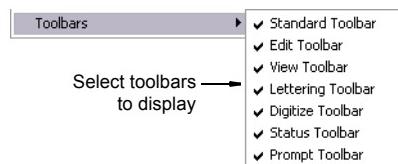
Toolbars provide quick and easy access to Digitizer EX commands. You can choose to show or hide them for convenience.



Try this! To increase your working area, hide unwanted toolbars and use the menu and keyboard commands instead. See [Quick Reference](#) for details.

To show or hide toolbars

- Select **View > Toolbars**.



- Select the toolbars you want to display.

- Deselect the toolbars you want to hide.



Note Digitizer EX toolbars are dockable. To move a toolbar to a more convenient location, click and drag it. To dock it in its normal position, double-click the toolbar title.



Using popup menus

Right-clicking a selected object opens a popup menu containing frequently used commands.

To use popup menus

- Right-click a selected object.
The popup menu opens.
- Select a command from the menu.

Undoing and redoing commands



Use Undo (Standard toolbar) to undo a command.



Use Redo (Standard toolbar) to reapply a command which has been 'undone'.

You can undo the effects of most commands. If you change your mind, you can redo them again. Digitizer EX remembers the last few commands you used.

To undo and redo commands

- To undo a command, click the **Undo** icon. When Digitizer EX cannot remember more commands, **Undo** is dimmed.
- Click **Redo** to re-apply an 'undone' command.

Creating new designs

When you start Digitizer EX, a new file – **Design1** – is automatically created, ready for you to start digitizing. By default, **Design1** is based on the NORMAL template. Templates contain pre-set styles, defaults or objects, to make digitizing quicker and easier.



Try this! Whenever you create a new design, save it with a new name. See [Saving designs](#) for details.

Creating new designs with the NORMAL template



Click New (Standard toolbar) to start a new design with the NORMAL template.

You can create a new design with the NORMAL template.

To create new designs with the NORMAL template

- Click the **New** icon.
A blank design opens in the design window.

Creating new designs with custom templates

You can select a custom template to base your new design on. If there is no template other than default, the **New** dialog may not appear. See [Managing design templates](#) for details.

To create new designs with a custom template

- Select **File > New**.
The **New** dialog opens.



- Select a template from the list.
- Click **OK**.

Displaying hoops and grids

A representation of the selected hoop is displayed in the Design Window. This provides a guideline for sizing and positioning designs. Use grid lines to help accurately align or size embroidery objects.

Displaying the hoop



Click Display Hoop (View toolbar) to hide or show the hoop.

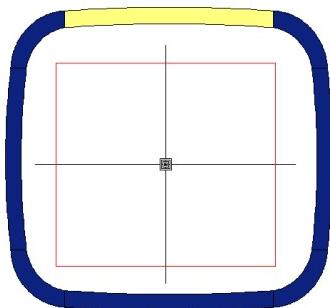
Hoops are required to hold the fabric tight while stitching on your machine. They are available in different sizes. A representation of the selected hoop providing a guideline for sizing and positioning your design is displayed in the Design Window. See also [Grids and Hoops](#).



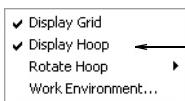
Note The boundary of the working area within the hoop is displayed as a thin red line. If any part of the design lies outside the stitching area for the selected hoop, a warning displays when saving. This prevents you from accidentally stitching outside this area and damaging your machine by hitting the hoop with the needle. You can show or hide the hoop at any time.

To display the hoop

- Click the **Display Hoop** icon to toggle hoop display on or off.



- Alternatively select **View > Hoop**.
- Alternatively, right-click a blank part of the design window. This brings up a popup menu:



Toggle hoop display on/off



Try this! You can change the grid spacing, drag the slider. See [Setting grid spacing](#) for details.

Displaying the grid

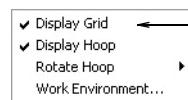


Click Display Grid (View toolbar) to hide or show the grid.

You can show or hide the grid at any time.

To display the grid

- Click the **Display Grid** icon to toggle grid display on or off.
- Alternatively select **View > Grid**.
- Alternatively, right-click a blank part of the design window. This brings up a popup menu:



Toggle grid display on/off



Try this! You can change the grid spacing by dragging the slider. See [Setting grid spacing](#) for details.

Measuring distances on screen

Use Measuring Tape (View menu) to measure distances on-screen.

Measure the distance between two points on screen using the **Measuring Tape** command. Measurements are shown in millimeters or inches, depending on the option selected in the Windows Control Panel. See your Windows documentation for more information.



Try this! For more accurate results, zoom in before you measure. The measurement is always the actual size, and is not affected by the zoom factor.

To measure a distance on-screen

- Select **View > Measuring Tape**.
- Click the start point.
- Move the pointer to the end point and hold the mouse still.

The tooltip displays the length of the measured line together with the stitch angle.



- Press **Esc** to finish.



Note You can also check the width and height of your design in the status bar.

↔ 184.68 ↓ 223.20

Saving designs

Digitizer EX lets you save designs in native JAN as well as other 'outline' and 'stitch' file formats. See [Embroidery design formats](#) for details.

Saving current design



Use Save (Standard toolbar) to save the current design.

Saving a design records its file name, location and format, and updates it with any changes you make. When you save an existing design under a new name, to a different location or format, you create a copy of the original design. See [Saving designs for machine](#) for details.



Try this! Save your design early and often. Do not wait until you finish working. You can also set Digitizer EX to save automatically while you work. See [Setting automatic save options](#) for details.

To save a design

- 1 Click the Save icon.

If this is the first time you have saved the design, the **Save As** dialog opens.



Try this! To save changes to an existing file but preserve the original, use **Save As**.



- 2 Select the folder where you want to save the design from the **Save In** list.
- 3 Enter a name for the design in the **File name** field.
- 4 Select a file format from the **Save as type** list. See [Supported embroidery file formats](#) for details.
- 5 Click **Save**.

Once you have saved a design, every time you click **Save** on the toolbar the file will be updated.



Try this! Files saved in JAN format are automatically compressed when saved and decompressed when re-opened. This reduces the storage space required, and makes it possible to save large files to floppy disk, or send them as email attachments.

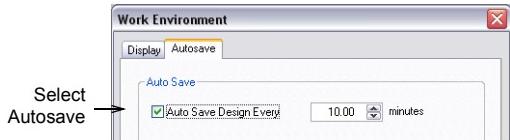
Setting automatic save options

Select Work Environment (Setup menu) to set automatic save options.

Save your work automatically at regular intervals using **Auto Save** to protect you from losing work in the event of hardware or software failure. See [Problem recovering design files from backup folder](#) for details.

To set automatic save options

- 1 Select **Setup > Work Environment**. The **Work Environment > Display** dialog opens.
- 2 Select the **Autosave** tab.



- 3 Select the **Auto Save Design Every** checkbox.
- 4 Enter the auto-save frequency in the **Minutes** field.
The design will be saved in the BACKUP folder of your Digitizer EX installation. It will have the same name as the original file with the extension **BAK**.



Warning Backup files remain in the **Backup** folder until you delete them. To prevent the folder from using too much hard disk space, delete unwanted files regularly.

- 5 Click **OK**.

Chapter 5

VIEWING DESIGNS

Digitizer EX provides many viewing features to make it easier to work with your design. Zoom in on an area to see more detail or view the design at actual size.

Show or hide various design elements with the available display settings. You can show or hide needle penetration points, connectors and the stitches themselves.

Digitizer EX also provides information about designs in a variety of ways and formats. Before even opening

Digitizer EX or your design, you can check the design information for JAN or JEF files directly from Windows Explorer. The design printout too provides essential production information, including a design preview, the size of the design, color sequence and any special instructions.

This section explains the design viewing modes available in Digitizer EX as well as the various design viewing settings. It describes how to view the stitching sequence in both EasyDesign and EasyEdit, and how to view the stitching sequence in slow motion. Access to design information is described, as well as viewing and hiding images.



Design viewing modes

Digitizer EX provides many viewing modes to make it easier to work with your design. Zoom in on an area to see more detail or view the design at actual size.

Viewing the whole design

Select **Zoom > Whole Design** (View menu) to display the whole design in the design window.

Digitizer EX provides a number of techniques for quickly displaying the whole design in the design window.

To view the whole design

- ◆ To view the whole design:
 - ◆ Select **View > Zoom > Whole Design**.
 - ◆ Select **View > Show > All Objects**.
 - ◆ Press **0**.
- ◆ To view the whole hoop:
 - ◆ Select **View > Zoom > Whole Hoop**.
 - ◆ Press **1**.
- ◆ To display selected objects in the window:
 - ◆ Select **View > Show > Selected Objects only**.
- ◆ To display selected colors in the window, select **View > Show > Selected Colors only**. See also [Design viewing settings](#).

Zooming and panning designs



Click **Zoom In** (View toolbar) to display a design at twice its current size.



Click **Zoom Out** (View toolbar) to display a design at half its current size.



Click **Zoom Box** (View toolbar) to zoom in on a section of a design.

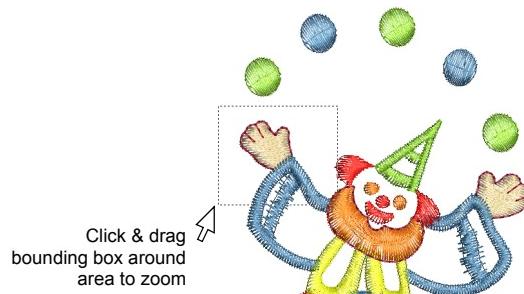
Select **Zoom > Whole Hoop** (View menu) to view the whole hooped area.

Select **Zoom > Whole Design** (View menu) to view the whole design.

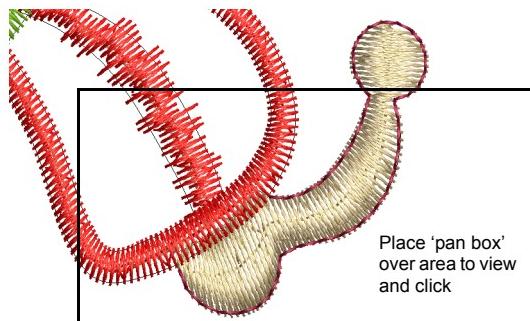
Magnify your view of the design by zooming in on individual stitches or details, or zoom out to display more of the design in the window. In addition to the scroll bars, panning provides a quick way to view parts of a design which are not currently visible in the design window. Panning is typically used after zooming in on an area.

To zoom and pan a design

- ◆ To display a design at twice its current size, select **View > Zoom In**.
- ◆ To display a design at half its current size, select **View > Zoom Out**.
- ◆ To zoom in on a section of the design, click **Zoom Box** and select a zoom percentage.
- ◆ To zoom in on a section of the design, press the **B** key on your keyboard, then drag a bounding box around the zoom area.



- ◆ To pan across a design in the design window, select **View > Pan** or press **P**. Move the 'pan box' over the part of the design you want to view and left-click. EasyDesign centers the design window around the point you clicked.



Working with the Overview Window



Use **Overview Window** (View toolbar) to toggle Overview window display on/off. Use it to view a thumbnail of the design.

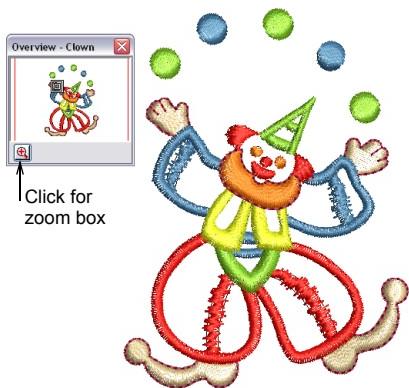
Use the Overview Window to view a thumbnail of the design. The window updates whenever you make a change and can be used to zoom in or pan across the design window. See also [Zooming and panning designs](#).



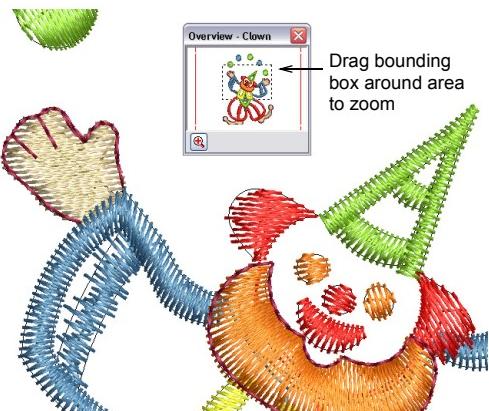
Note To change the view settings for the Overview window, click it to make it the active window. See [Design viewing settings](#) for details.

To work with the Overview Window

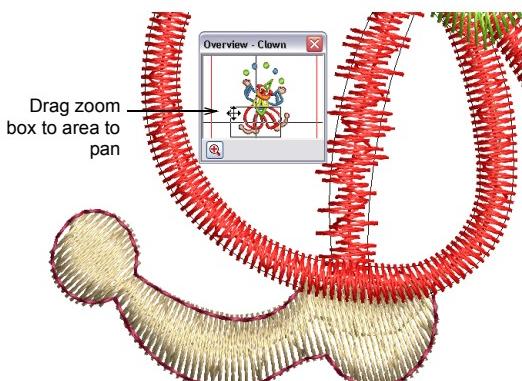
- 1 Click the **Overview Window** icon. The **Overview** window opens.



- 2 To zoom in or out, click the **Zoom** button at the bottom of the window and drag a bounding box around the area to zoom.



- 3 To pan across the design, move the cursor inside the zoom box – it changes to a four-way arrow cursor – and drag it.



Design viewing settings

You can show or hide design elements with a variety of display settings. Show or hide needle penetration points and connectors. Show or hide selected colors.

Viewing designs in Vizualizer

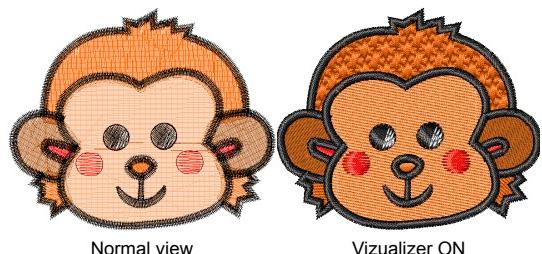


Click Vizualizer (View toolbar) to change between normal view and Vizualizer view.

Vizualizer offers a graphical representation of what the final embroidery will look like.

To view designs in Vizualizer

- Click the Vizualizer icon to switch between Vizualizer and normal view.



Try this! Use Vizualizer together with a background fabric to see how your design will look when stitched out. See [Changing backgrounds](#) for details.

Viewing needle points

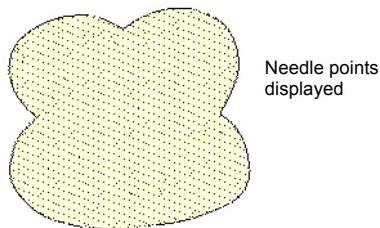


Use Display Needle Points (View toolbar) to show or hide the needle points in a design.

EasyEdit lets you show or hide needle points in your design. This is useful when you want to select stitches for editing. See [Stitch Editing](#) for details.

To view needle points

- To show or hide needle points, click the **Display Needle Points** icon.
- To hide connecting threads, view design in Vizualizer mode.



Viewing selected parts of a design

Select **Show > Selected Objects** (View menu) to show only selected objects in a design.

You can set your system to display all embroidery objects in a design, or hide all but the selected objects.

To view selected parts of a design

- 1 Create or open a design.
- 2 Select the required object/s.



- 3 Select **View > Show > Selected Objects Only**.



Only objects that are currently selected are visible. This option is only available when objects are selected.

Viewing design objects by color

Select **Show > Selected Color Only** (View menu) to show only selected colors in a design.

To help you isolate individual design elements for checking or manipulation, the **Selected Color**

Only function lets you view objects by color. This is particularly useful when you are resequencing objects by color. See also [Resequencing objects by color](#).

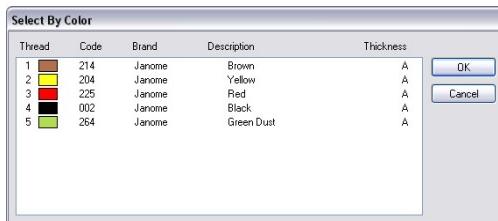
To view design objects by color

- 1 Create or open a design.



- 2 Select **View > Show > Selected Color Only**.

The **Select By Color** dialog opens.

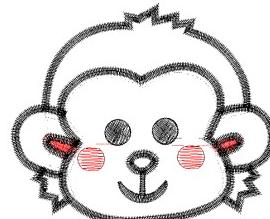


- 3 Select the colors you want to view.

- ♦ To select a range of items, hold down **Shift** as you select.
- ♦ To select multiple items, hold down **Ctrl** as you select.

- 4 Click **OK**.

The design appears with only those colors you selected in view.



Try this! To see the whole design again, select **View > Show > All Objects**.

Traveling through the stitching sequence in EasyDesign

When working with embroidery designs, you need to understand the stitching sequence. You can view a design's stitching sequence in EasyDesign by 'traveling' through it by colors or objects.

Digitizer EX simulates stitching out by changing stitches from black to their allocated thread color as they are 'stitched'.

Traveling to the start or end of a design



Use Jump to Start/End of Design (View toolbar) in conjunction with Forward and Back icons to travel to the start or end of a design.



Click Forward (View toolbar) to travel forwards through the stitch sequence.



Click Back (View toolbar) to travel back through the stitch sequence.

Use the **Jump to Start/End of Design** tool or keyboard shortcuts to travel quickly to the start or end of the stitching sequence. See also [Appendices, Glossary & Index](#).

To travel to the start or end of a design

- To travel to the start of the design, click the **Jump to Start/End of Design** icon, then click the **Back** travel icon.
- To travel to the end of the design, click the **Jump to Start/End of Design** icon, then click the **Forward** travel icon.

Traveling by object



Use Jump by Object (View toolbar) in conjunction with Forward and Back icons to travel to the previous or next object.



Click Forward (View toolbar) to travel forwards through the stitch sequence.



Click Back (View toolbar) to travel back through the stitch sequence.

In EasyDesign, use the object travel tool or keyboard shortcuts to travel through the design by object. This technique is useful if you need to locate a specific object in order to insert another object or delete it from the stitching sequence. Use it in conjunction with the stitch travel tools if you

want to 'nest' an object. See [Nesting objects](#) for details. See also [Appendices, Glossary & Index](#).

To travel by object

- To travel to the previous or next object, click the **Jump by Object** icon, then click the **Back** or **Forward** travel icon.



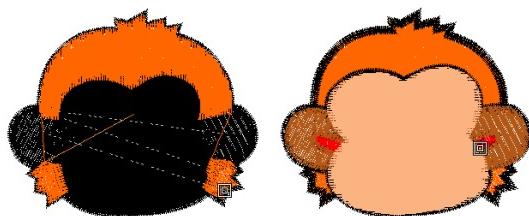
Note You cannot travel by object in EasyEdit.

Traveling by color



Use Jump by Color (View toolbar) in conjunction with Forward and Back icons to travel to the previous or next color change.

Use the **Jump by Color** tool or keyboard shortcuts to travel through the design by color. This is useful if you need to locate a specific color change in order to insert an object or delete it from the stitching sequence. See also [Appendices, Glossary & Index](#).

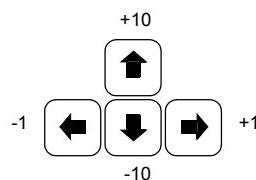


To travel by color

- To travel to the previous or next color, click the **Jump by Color** icon, then click the **Back** or **Forward** travel icon.

Traveling by stitches

You can use the shortcut keys to travel by stitches through your design in EasyDesign. Press **Esc**, then press the left and right arrows to jump backwards by 1 stitch, the up and down arrows by 10 stitches, and the keypad '+' and '-' by 100 stitches. See also [Traveling by stitches](#).



Traveling through the stitching sequence in EasyEdit

When working with embroidery designs, you need to understand the stitching sequence. You can view a design's stitching sequence in EasyEdit by 'traveling' through it by stitches or colors.

Digitizer EX simulates stitching out by changing stitches from black to their allocated thread color as they are 'stitched'. See also [Stitch Editing](#).

Traveling to the start or end of a design



Use Jump to Start/End of Design (View toolbar) in conjunction with Forward and Back icons to travel to the start or end of a design.



Click Forward (View toolbar) to travel forwards through the stitch sequence.



Click Back (View toolbar) to travel back through the stitch sequence.

Use the **Jump to Start/End of Design** tool or keyboard shortcuts to travel quickly to the start or end of the stitching sequence. See also [Appendices, Glossary & Index](#).

To travel to the start or end of a design

- To travel to the start of the design, click the **Jump to Start/End of Design** icon, then click the **Back** travel icon.
- To travel to the end of the design, click the **Jump to Start/End of Design** icon, then click the **Forward** travel icon.

Traveling by color



Use Jump by Color (View toolbar) then use the Forward and Back icons to travel to the previous or next color change.

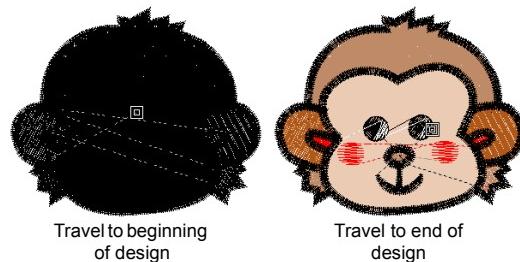


Click Forward (View toolbar) to travel forwards through the stitch sequence.



Click Back (View toolbar) to travel back through the stitch sequence.

Use the color travel tool or keyboard shortcuts to travel through the design by color. This is useful if you need to locate a specific color change in order to insert a stitch or delete it from the stitching sequence. See also [Appendices, Glossary & Index](#).



To travel by color

- To travel to the previous or next color, click the **Jump by Color** icon, then click the **Back** or **Forward** travel icon.



Note See [Appendices, Glossary & Index](#) for a summary of travel functions.

Traveling by stitches



Use Jump By 1 Stitch (View toolbar) in conjunction with Forward and Back icons to travel by 1 stitch.



Use Jump By 10 Stitches (View toolbar) in conjunction with Forward and Back icons to travel by 10 stitch.



Use Jump By 100 Stitches (View toolbar) in conjunction with Forward and Back icons to travel by 100 stitch.



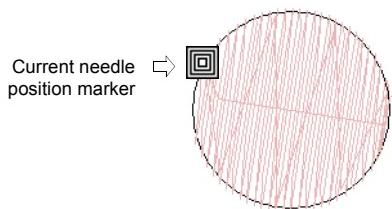
Click Forward (View toolbar) to travel forwards through the stitch sequence.



Click Back (View toolbar) to travel back through the stitch sequence.

Use the stitch travel tools or shortcut keys to travel through the design one or more stitches at a time. You can only travel by stitches, to the start or end of a design or travel by color, as well as edit stitches in EasyEdit. You can jump to the start or end of a design or travel by object or color in EasyDesign. See also [Appendices, Glossary & Index](#).

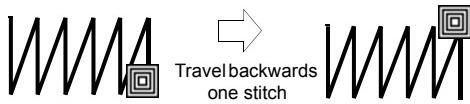
The current needle position is indicated by a 'current stitch position marker'. Initially, this is located at the end of the design. When you travel through stitches, the needle position marker moves accordingly. See also [Stitch Editing](#).



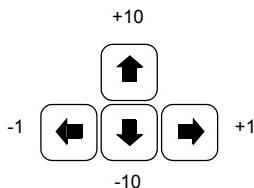
To travel by stitches

- 1 In EasyEdit, select a stitch traveling tool. You can choose from the following:
 - ◆ Jump By 1 Stitch
 - ◆ Jump By 10 Stitches
 - ◆ Jump By 100 Stitches.
- 2 Travel through the design.
 - ◆ To travel to the next stitch in the stitching sequence, click the Forward arrow on the toolbar.
 - ◆ To travel to the previous stitch, click the Back arrow.

As you travel, the current position marker moves to show the stitching sequence.



Try this! You can also use the shortcut keys to travel by stitches through your design. Press **Esc**, then press the left and right arrows to jump backwards by 1 stitch, the up and down arrows by 10 stitches, and the keypad '+' and '-' by 100 stitches.



Redrawing the stitching sequence slowly



Use Slow Redraw (View toolbar) to view the stitching and color sequence of a design in slow motion.

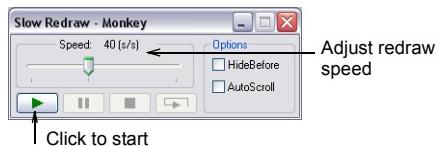
Slow Redraw lets you view the stitching and color sequence of a design in slow motion.



Note Slow Redraw cannot be used with Vizualizer.

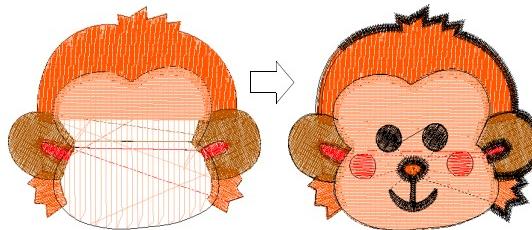
To redraw the stitching sequence slowly

- 1 Click the **Slow Redraw** icon or press **Shift + R**. The **Slow Redraw** dialog opens.



Try this! To redraw only a section of the design, travel to the point where you want to start Slow Redraw. See [Traveling through the stitching sequence in EasyDesign](#) for details.

- 2 Use the slider bar to adjust the redraw speed.
- 3 Select the options as required:
 - ◆ **Hide Before:** Hide all sections of the design prior to the current cursor position.



◆ **Auto Scroll:** With larger designs, scroll automatically so that the area being stitched remains on-screen.

- 4 Click **Go**. The design is redrawn on-screen according to the stitching sequence and selected speed.
- 5 Click **Pause**, **Stop** or **Back to Start** as required.
 - ◆ **Pause** pauses the redraw, letting you resume where you left off.
 - ◆ **Stop** stops the redraw and returns to the beginning of the design.
 - ◆ **Back to Start** redraws from the beginning of the design.

Viewing design information

Digitizer EX provides information about designs in a variety of ways. Before even opening Digitizer EX, you can check design information directly from Windows Explorer. The **Open** dialog also gives you important file information. The status bar in the design window is another source of information about designs. The print preview provides complete design information.

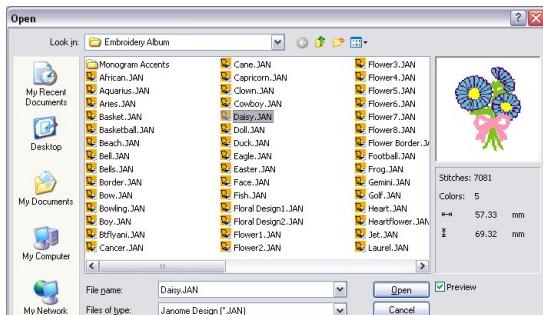
Viewing design information in Digitizer EX

Within Digitizer EX, the **Open** dialog gives you important file information as well as the status bar in the design window.

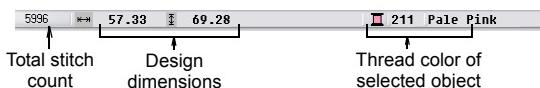
To view design information in Digitizer EX

- Click the **Open** icon.

The **Open** dialog shows limited information about selected designs in the preview panel.



- When you open a design, the status bar shows design information such as total stitch count.



Previewing design printouts

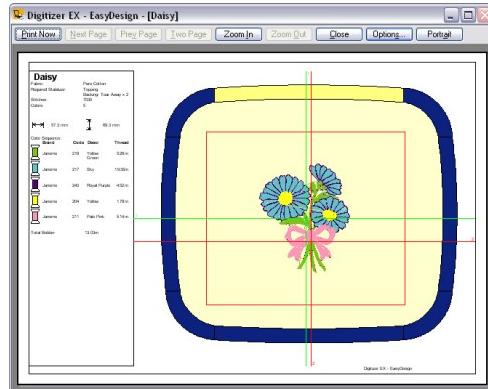
Click Print Preview (Standard toolbar) to preview the design printout on screen.

The print preview contains a design preview and essential information, including the size of the design, color sequence and any special stitching instructions. See also [Printing Designs](#).

To preview a design printout

- Click the **Print Preview** icon.

The design printout displays in a preview window.



- Adjust the view as required:

- To change the orientation of the paper, click **Landscape** or **Portrait**.
- To change the information that displays, click **Options**. See also [Setting print options](#).
- To print the design, click **Print**.
- To close the print preview, click **Close**.



Try this! Zoom in to view the design preview more closely. Large designs may be displayed over a number of pages.

Viewing and hiding images

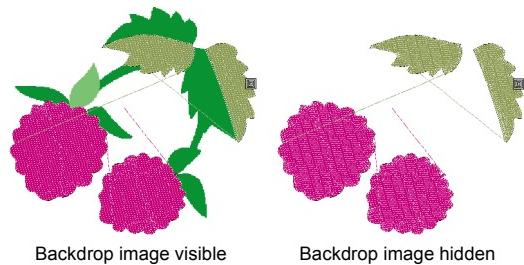


Use Display Images (View toolbar) to show and hide backdrops.

You can show or hide a bitmap backdrop temporarily while you digitize. Hiding backdrops does not delete them from the design.

To view or hide images

- Click the **Display Images** icon or press **D**. When selected, backdrop images are visible.



Backdrop image visible

Backdrop image hidden

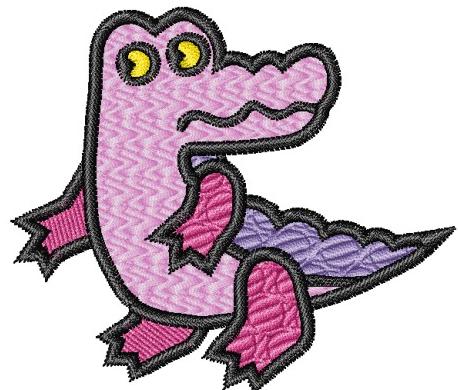
- ♦ To hide the image, click **Display Images** or press **D** again.

Chapter 6

SELECTING OBJECTS

Digitizer EX EasyDesign provides various ways to select the [objects](#) that comprise an embroidery design. You can select all objects to modify the design as a whole, or individual objects for more precise modification.

This section describes how to select objects using the selection tools and keyboard. It shows how to select while traveling through the design and how to select objects of a specific color. You can also select individual stitches in EasyEdit. See also [Stitch Editing](#).

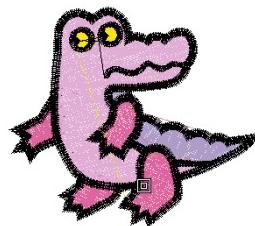


Selecting all objects in a design

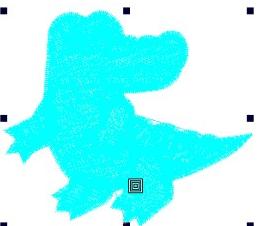
The **Select** tool provides various means for selecting [objects](#) including point and click, bounding box selection, and – in conjunction with **Shift + Tab** keys – first/last and next/previous object selection. You can also select all objects to apply changes to a whole design.

To select all objects in a design

- ◆ Select **Edit > Select All** or press **Ctrl + A**.
Sizing handles appear around the entire design.



No objects selected



All objects selected

- ◆ To deselect, press **X** or **Esc**.

Selecting objects by point and click



Click Select (Edit toolbar) and click an object to select it.

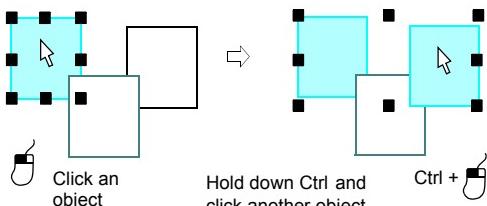


Warning The simplest way to select **objects** is by pointing and clicking with the mouse with the **Select** tool activated. With **Shift** and **Ctrl** keys, you can select multiple objects.

To select objects by point and click

- 1 Click the **Select** icon.
- 2 Click the object you want to select.

When you click an object, selection handles appear around it. You can click anywhere within these extents to click and drag the object.



- To select a range of items, hold down **Shift** as you select.
- To select multiple items, hold down **Ctrl** as you select.



Try this! To select an object which is behind another object, zoom in and click the outline. Alternatively, position the pointer over the object, hold down the **2** key, and click until the object is selected. Each click selects the next overlapping object.

Selecting objects with a bounding box

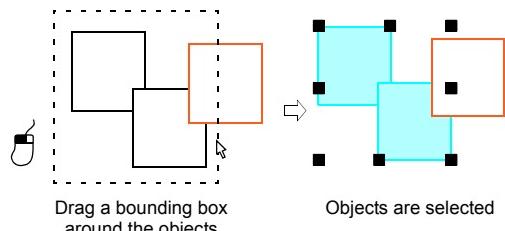


Click Select (Edit toolbar) and drag a bounding box around the object to select.

With the **Select** tool activated, you can select **objects** by dragging a bounding box around them.

To select objects with a bounding box

- 1 Click the **Select** icon.
 - 2 Drag a bounding box around the objects you want to select.
- Objects are selected when you release the mouse button.



Note Unless they have already been grouped, only objects completely within the bounding box will be selected when you release the mouse button. See also [Grouping objects](#).

Selecting a range of objects by point and click



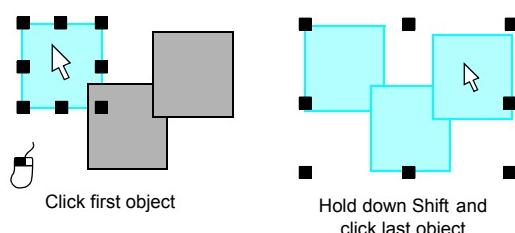
Click Select (Edit toolbar) together with the **Shift** key to select a range of objects.

You can select a range of **objects** by holding down **Shift** while you click the first and last objects in the range.

To select a range of objects by point and click

- 1 Click the **Select** icon.
- 2 Click the first object in the range and hold down **Shift**.
- 3 Click the last object in the range.

All objects in the stitching sequence between first and last selected objects are selected.





Note It helps to know the design stitching sequence for this method. See [Traveling by object](#) for details.

Selecting objects with Polygon Select

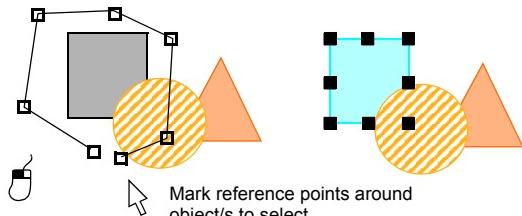


Click Polygon Select (Edit toolbar) to select objects with a bounding box.

Sometimes the **Select** tool does not provide fine enough control. The **Polygon Select** tool lets you select individual [objects](#) by drawing an outline around them. Use **Polygon Select** to select objects with a bounding box.

To select objects with Polygon Select

- 1 Click the **Polygon Select** icon.
- 2 Mark reference points around the object/s you want to select.



The objects you want to select must be completely within the outline.

- 3 Press **Enter** to select.

Selecting objects while traveling through a design



Click Select (Edit toolbar) to select objects.



Click Jump by Object (View toolbar) to travel by objects.



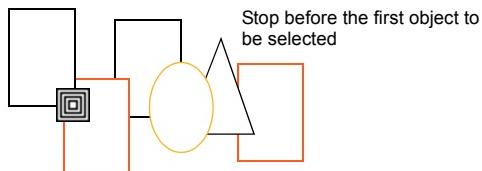
Click Stitch Select While Traveling (View toolbar) to select objects while traveling.

In EasyDesign, you can select [objects](#) as you 'travel' through the design. Traveling is usually

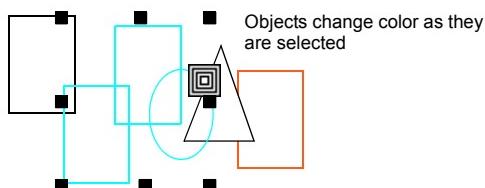
associated with checking the stitching sequence. See also [Selecting stitches while traveling](#).

To select objects while traveling through a design

- 1 Click the **Jump by Object** icon and travel through the design, stopping just before the object to select. See [Traveling by object](#) for details.



- 2 Click the **Select** icon.
- 3 Click the **Stitch Select While Traveling** icon.
- 4 Continue traveling through the design. As you travel, objects are selected.



- 5 When you have finished selecting, click the **Stitch Select While Traveling** icon again to turn it off.



Note If an object is already selected, it is deselected when you travel through it.

- ♦ To select more objects, continue traveling with **Ctrl** held down.
- ♦ To leave an object out of the selection, release **Ctrl** before you travel through it.

Selecting colors while traveling through a design



Click Select (Edit toolbar) to select objects.



Click Jump by Color (View toolbar) to travel by color.



Click Stitch Select While Traveling (View toolbar) to select colors while traveling.

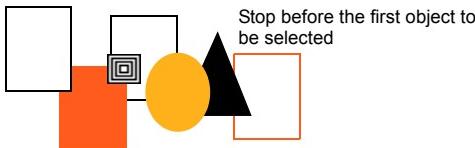
In EasyDesign, you can select colors as you 'travel' through the design. Traveling is usually associated with checking the stitching sequence. See also [Selecting stitches while traveling](#).



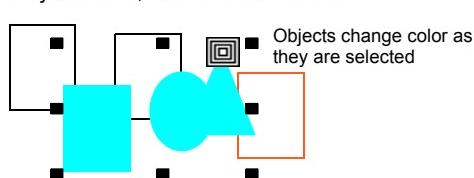
Try this! You can select [objects](#) in one color using **View > Show > Selected Color only**. See [Viewing design objects by color](#) for details.

To select colors while traveling through a design

- 1 Travel through the design, stopping just before the color to select. See [Traveling by object](#) for details.
- 2 Click the **Jump by Color** icon.



- 3 Click the **Select** icon.
- 4 Click the **Stitch Select While Traveling** icon.
- 5 Continue traveling through the design.



- 6 When you have finished selecting, click the **Stitch Select While Traveling** icon again to turn it off.



- Note** If a color is already selected, it is deselected when you travel through it.
- To select more objects, continue traveling with **Ctrl** held down.
 - To leave an object out of the selection, release **Ctrl** before you travel through it.

Selecting and viewing objects with the Resequence dialog



Use Resequence (Edit toolbar) to toggle the Resequence dialog on and off. Use it to select and view objects in a design.

The **Resequence** dialog provides a sequential list of [objects](#) as digitized, grouped by 'color block'. It is a 'modeless' dialog meaning that it stays on the design window as long as you need it and offers an easy way to select objects and view them. It is synchronized with the design window, dynamically updating whenever you manipulate objects. It is normally docked on the right of the design window but can be dragged to any position and resized as required.

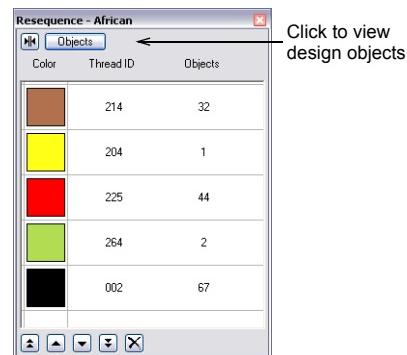


Note You can use the **Resequence** dialog to lock and unlock objects. Use it also to cut, copy and paste, resequence, as well as branch objects. See also [Resequencing embroidery objects](#).

To select and view objects with the Resequence dialog

- 1 Click the **Resequence** icon.

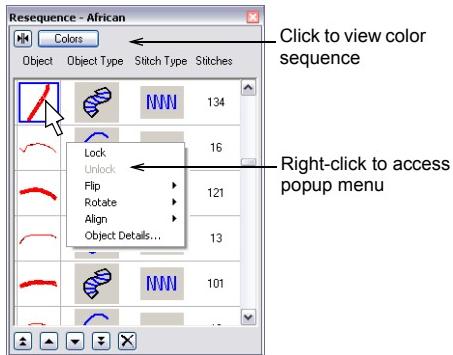
The **Resequence** dialog opens. It can be docked to the left or right side of the design window, or dragged to any position.



In color mode, the **Resequence** dialog shows a separate icon for each color block in the design, in order of stitching sequence. It also indicates the thread color code together with the number of objects using the color.

- 2 Click the **Objects** button to view design objects.

The **Resequence** dialog now shows a separate icon for each object in the design. The stitch count of each is also shown, together with the object type and stitch type used in its creation.



Try this! You can access certain commands via the popup menu dialog, including lock/unlock and object details.

- 3 Click an icon to select a color block and/or individual objects.

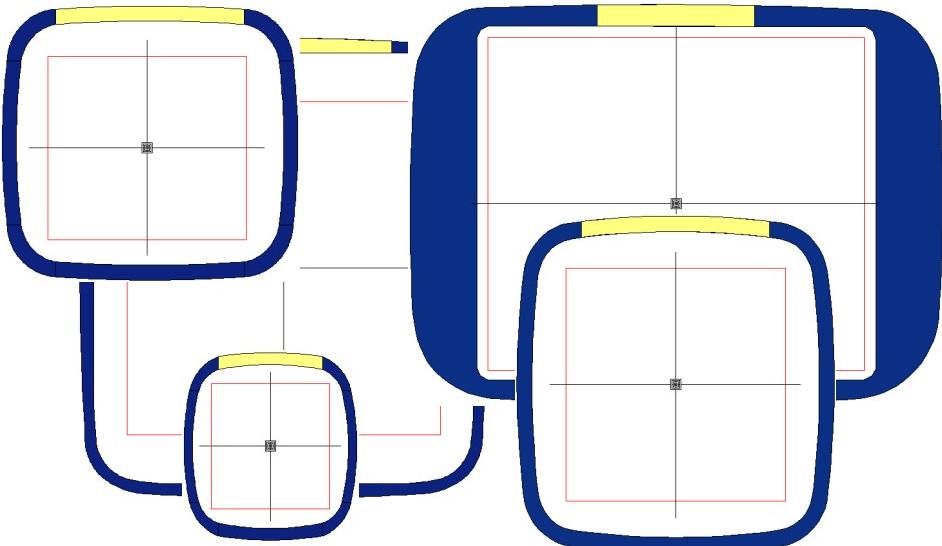
When a color block is selected, all of its component objects are selected as well.

- ♦ To select a range of items, hold down **Shift** as you click.
- ♦ To select multiple items, hold down **Ctrl** as you click.
- ♦ To deselect all objects, click away from objects or color blocks.

Chapter 7

GRIDS AND HOOPS

Hoops are required to hold the fabric tight while stitching on your machine. They are available in different sizes. Digitizer EX allows you to select from a wide range of standard factory-supplied hoops. If you have a hoop which does not appear in the list, you can define a custom hoop from scratch or based on a standard hoop. A representation of the selected hoop providing a guideline for sizing and positioning your design is displayed in the Design Window.



This section describes how to set grid spacing in Digitizer EX. It also covers changing hoops and defining your own custom hoops. It explains splitting designs on an MA Hoop when sending to machine as well as changing hoop backgrounds.

Setting grid spacing

Use Work Environment (Setup menu) to set grid spacing.

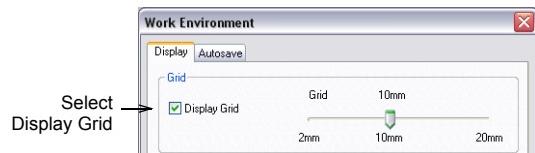
Use grid lines to help accurately align or size embroidery objects. Turn on or off the grid, or change grid spacing as required.

To set grid spacing

- Select Setup > Work Environment.

The **Work Environment > Display** tab opens.

- Select the **Display Grid** checkbox to display the grid.

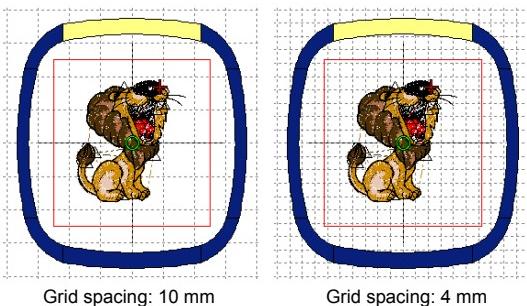


- Adjust **Grid Spacing** by moving the slider.
The spacing value is displayed above the slider.



Try this! To use these settings as defaults for the current template, click **Save**.

- Click **OK**.



Grid spacing: 10 mm

Grid spacing: 4 mm

Selecting hoops

Whenever you create a new design, a single hoop representing the embroidery hoop you connect to your embroidery machine appears by default in the middle of the Design Window. The selected hoop is saved with the design in the native JAN file format. It is also saved to the JEF file which the machine reads. A range of hoop sizes is available for a wide variety of design types. You can also change hoop

orientation on screen for ease of digitizing. See also [Rotating hoops](#).



Warning Make sure you have the correct hoop selected and that your design fits within the design area on your embroidery machine. When the machine reads the JEF file, the stitching area is limited by the selected hoop type.

Changing hoops

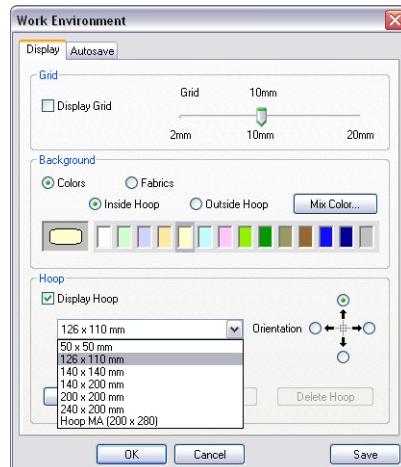


Use Hoop Type dropdown list to change hoops.

It is a good idea to have the correct hoop selected before you stitch out a design. But sometimes you may wish to change hoops before stitching out. The **Hoop Type** dropdown list control lets you quickly confirm what hoop is currently being used and change it at any time. Select the smallest hoop which fits the design from the available range. See [Supported hoop types](#) for details.

To change hoops

- Select a hoop type by either of the following means:
 - Select from the **Hoop Type** dropdown menu.
 - Select **Setup > Work Environment** and select a hoop from the **Hoop** list.



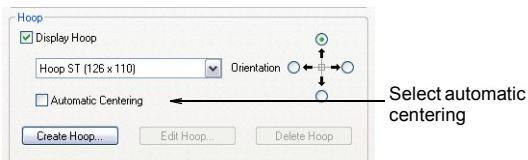
Try this! The hoop background color can be changed. See [Changing backgrounds](#) for details.

Centering hoops

The **Automatic Centering** function ensures that the center of the hoop (or offset center for older style hoops – i.e. Hoop No.1&3), is automatically positioned at the center of the current design, or at the (0, 0) point of the current design window while the design contains no stitches. Otherwise the hoop center – or offset center for old hoops – is fixed at the (0, 0) point of the current design window.

To center the hoop

- 1 Open the **Work Environment** dialog:
 - ♦ Select **Setup > Work Environment**.
 - ♦ Right-click on the design window with nothing selected and select **Work Environment**.
- 2 Click the **Automatic Centering** checkbox in the **Display** tab.



Rotating hoops

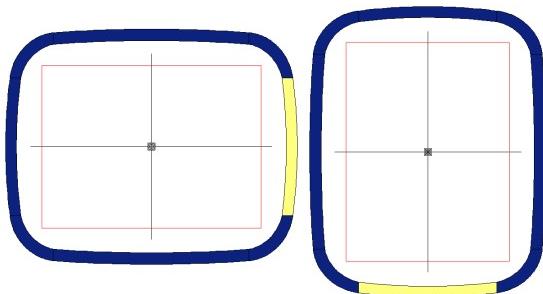


Use **Rotate Hoop 90° CCW / CW** (Edit toolbar) to rotate the hoop 90° in either direction.

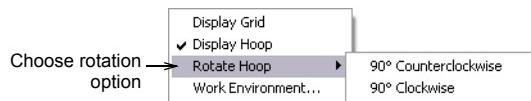
The **Rotate Hoop** tool allows you to rotate the hoop for ease of digitizing. The attachment mechanism is indicated, both on screen and printed worksheets. You can thereby tell the orientation of the design with respect to the hoop and decide how to position it. Rotate the current hoop by any one of the means described below.

To rotate the hoop

- ♦ Click the **Rotate Hoop 90° CCW / CW** icon.



- Right-click anywhere in the design window with nothing selected and select **Rotate Hoop > 90° Counterclockwise** or **90° Clockwise**.

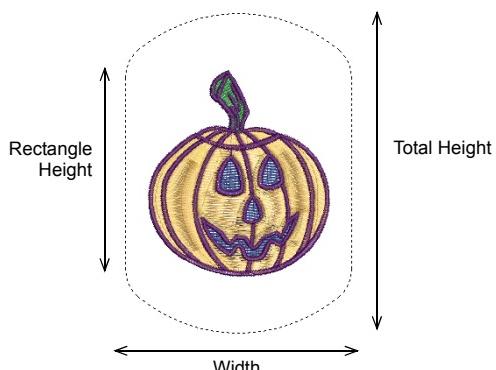


- Select **Setup > Work Environment** and choose a hoop orientation on the **Display** tab.



Defining custom hoops

If you are using a hoop size that is not in the hoop list, you can define your own and save it for later use. Two types of hoop can be defined or edited in Digitizer EX – Rectangular and Oval.



Custom hoops are needed because new hoops become available for sewing machines more frequently than the software is updated. Also some machines include hoop adaptors for third-party hoops which need to be defined in the software.

Digitizer EX records the embroidery area of custom hoops to JEF file which can then be read by multi-needle machines to determine the stitching area. On the other hand, the stitching area of single-needle machines is determined by the selected hoop type. If the file contains a 'non-standard' (custom) hoop code, the hoop size is automatically based on the design size which is used to limit the stitching area.

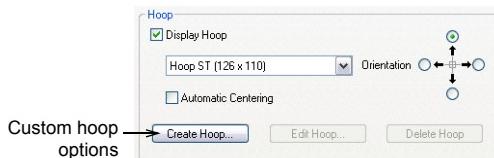


Note If you open a JAN file which contains a custom hoop not included in the hoop list, or if the hoop has the same name as a listed one but different type and/or settings, Digitizer EX creates a new custom hoop with the same characteristics and tags it with a system-generated name.

To define or edit a custom hoop

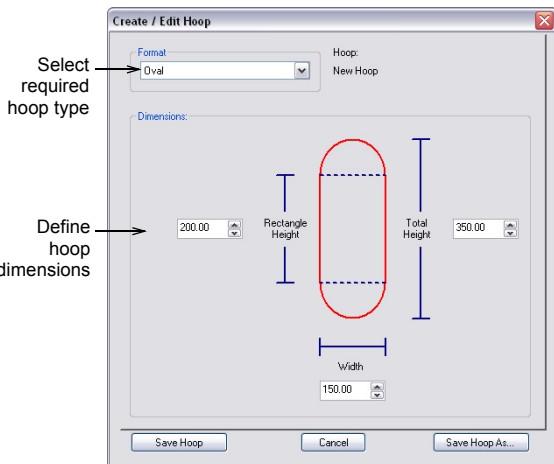
- Select **Setup > Work Environment** or right-click within the Design Window and select **Work Environment** from the popup menu.

The **Work Environment > Display** dialog opens.



- Choose the desired option:
 - Create Hoop:** This button accesses the **Create/Edit Hoop** dialog which is used both for creating new hoops and editing existing ones.
 - Edit Hoop:** Select a custom hoop in the **Hoop** list and the **Edit Hoop** button becomes available. This button accesses the same **Create/Edit Hoop** dialog.
 - Delete Hoop:** Select a custom hoop in the **Hoop** list and click the **Delete Hoop** button to remove it from the list. You are prompted to confirm.

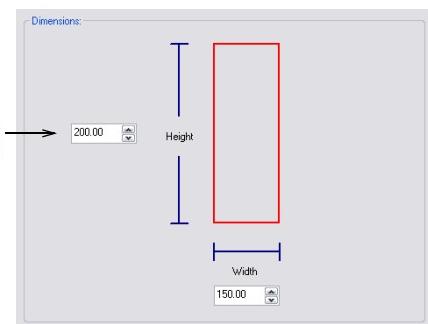
Whether you choose to create a hoop or edit an existing one, the **Create/Edit Hoop** dialog opens.



- In the **Format** panel, select **Rectangle** or **Oval** as required.
- Adjust the settings in the **Dimensions** panel as required:
 - For an oval hoop, enter **Rectangle Height**, **Total Height** and **Width**.
 - For a rectangular hoop, enter the **Height** and the **Width** of the rectangle.



Try this! You can create a circular hoop by entering '0' in **Rectangle Height** field and setting **Width** and **Total Height** fields to the same size.



Warning In order to avoid the possibility of the needle hitting the rim of the hoop, the size definition must be of the **embroidery area** of the hoop and not its **external** dimensions.

- Save the new or edited hoop definition:
 - If you are saving a modified hoop, click the **Save Hoop** button.

- If you are saving the definition as a new hoop, click the **Save Hoop As** button and enter a hoop name in the **Save Hoop As** dialog.



- Click **Save**.
- Click **OK** to close the **Work Environment** dialog.

Sending designs with an MA Hoop



Use Send to Machine (Standard toolbar) to send the current design to a machine for stitching.

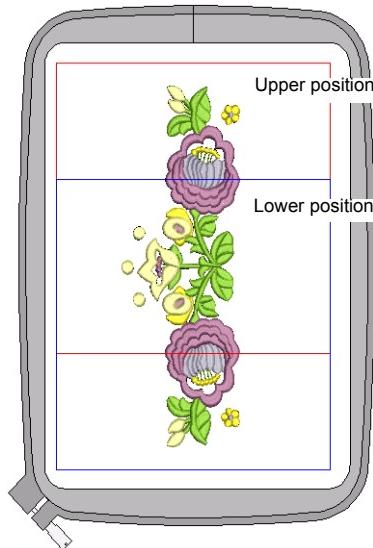
Digitizer EX supports the MA Hoop. This is a two-position hoop which expands the available sewing area of the machine for which it is supplied. In the list of available hoops, the MA Hoop is identified as 'Hoop MA (200 x 280)'. The two sewing fields are shown in red and blue. When digitizing, each embroidery object must fit entirely into one or other hoop position.

The behavior of the MA Hoop during loading and editing of embroidery designs is exactly the same as for a normal rectangular hoop of size 200 x 280. The fact that there are two sewing fields has no effect until you save the design or send it to a machine. When sending to machine, in most cases Digitizer EX will only create one file as the two hoop positions are saved in a single JEF file. However, if a return to hoop position 1 is required, Digitizer EX will create two (or on rare occasions, more) files.

To send the current design with an MA Hoop

- Open the design to send to machine.

The two sewing fields are shown in red and blue. When digitizing, each embroidery object must fit entirely into one or other hoop position.



Note Sizes are shown in mm for a 1:1 display. At other display scales, values are scaled proportionally.

- Click the **Send to Machine** icon on the **Standard** toolbar or select **Machine > Send Current Design**. If the machine is correctly linked, the **Send Current Design** dialog opens. See [Sending and writing designs](#) for details.
 - Click **Send** button.
- Digitizer EX determines whether there are any objects that do not lie wholly within one of the hoop's two positions:
- If there are, they are selected in the Design Window and you are prompted to edit or delete them. Otherwise Digitizer EX determines how many hoopings are needed.
 - If only one is needed, or two with the upper position first, Digitizer EX creates a single JEF file containing these hoopings and sends it to the machine.
 - Otherwise it calculates the number of hoop position changes and prompts you to proceed. If you agree, it creates multiple JEF files and sends them to machine.
- Click **OK**.

The JEF file names are numbered with a hyphen – 'My Flower- 1.JEF' and 'My Flower- 2.JEF'.

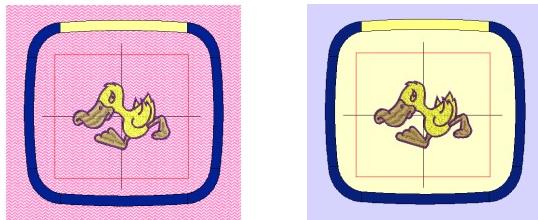


Note When the machine loads the first of the multiple JEF files, it stitches the upper-position first, then prompts you to move the hoop to the lower position. Always have the hoop in the upper position when the machine starts stitching a new JEF file unless you are

explicitly prompted to shift frame. This may be necessary in cases where a hooping pair must be split because it has too many stitches or too many color changes.

Changing backgrounds

In Digitizer EX, you can set the color inside the hoop to match the fabric you intend to stitch out on. You can also set a background color outside the hoop by way of contrast. Alternatively, you can add background fabrics based on samples packaged with the software. Backgrounds are treated as design details and are saved with the design.



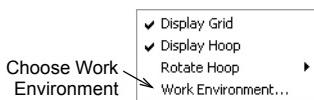
Changing background colors

Use Work Environment (Setup menu) to change the background color.

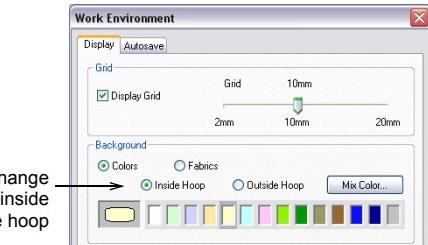
Set the color inside the hoop to match the fabric you intend to stitch out on. You can also set a background color outside the hoop by way of contrast. See also [Working with fabrics](#).

To change the background color

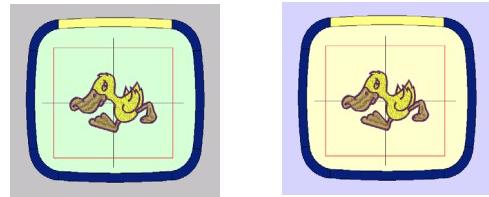
- 1 Select **Setup > Work Environment** or right-click the Design Window and select from the popup menu.



The **Work Environment** dialog opens.



- 2 If not already selected, select the **Colors** option.
- 3 Select the **Inside Hoop** or **Outside Hoop** option as required:
 - **Outside Hoop:** When selected, you choose a background color to apply to the area outside the hoop, or when the hoop is not displayed, to the whole Design Window.
 - **Inside Hoop:** When selected, a background color can be applied within the hoop.
- 4 Select a color from the palette or mix your own. See [Mixing your own background color](#) for details.
- 5 Click **OK**.



Inside hoop area recolored

Outside hoop area recolored

Changing background fabrics

Set the color inside the hoop to match the color of the fabric you intend to stitch out on. See also [Working with fabrics](#).

To change the background fabric

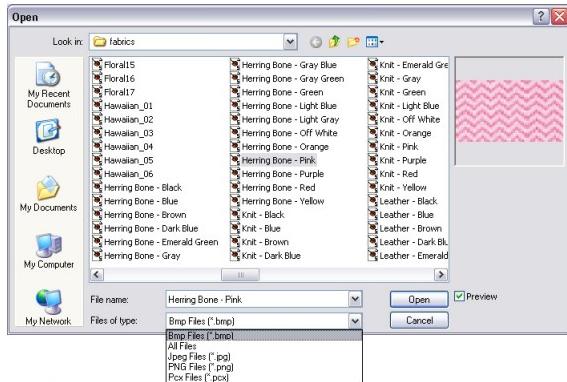
- 1 Select **Setup > Work Environment** or right-click the Design Window and select from the popup menu. The **Work Environment** dialog opens.
- 2 Select the **Fabrics** option.

The dialog changes as shown.



- 3 Click the **Browse Fabrics** button.

The **Select Fabric** dialog displays a selection of fabric samples to choose from.



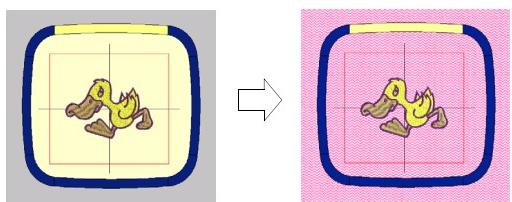
Try this! You can add your own fabric samples to the **Fabrics** folder in any of the supported file formats. You can also browse to another folder on your PC and select a file in any of these formats. See also [Supported embroidery file formats](#).

- 4 Select a fabric sample and click **Open** or simply double-click the file.

The selected fabric is displayed in the hoop preview in the **Work Environment** dialog.

- 5 Click **OK**.

The selected fabric is applied to the whole Design Window.



Background fabric applied

Mixing your own background color

Use Work Environment (Setup menu) to mix a new background color.

You can create a new background color for use with the current design. Each new design uses the default colors.

To mix your own background color

- 1 Select **Setup > Work Environment**.

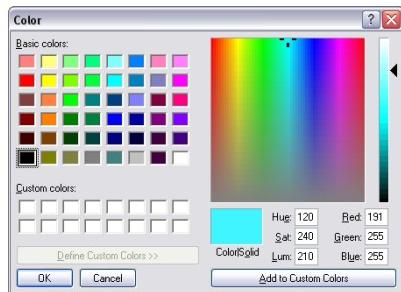
The **Work Environment** dialog opens.



- 2 Select a color slot in the palette.

- 3 Click **Mix Color**.

The **Color** dialog opens.



- 4 From the **Basic colors** table, select a color that most closely matches the color you want.

- 5 Click and drag the crosshairs on the color spectrum to get the exact color you require.

- 6 Drag the slider on the right of the color spectrum to adjust color brightness.

The Hue, Luminosity and Saturation (HLS) and Red, Green and Blue (RGB) values appear in the bottom right-hand corner of the dialog. Enter these values directly if you want to define an exact color.

- 7 When you have mixed your color, click **Add to Custom Colors** and then click **OK**.

The new color appears in the selected color slot.



Note The new color is only saved with this design. New designs use the default colors.

Part II

DIGITIZING ESSENTIALS

In EasyDesign, you build designs from basic shapes or 'embroidery objects'. These are like ordinary [drawing objects](#) in that they have certain defining characteristics or 'properties' such as color, size, position, and so on. They also have properties unique to embroidery such as stitch type and density.

Manual digitizing

This section describes how to digitize shapes with the main digitizing methods. It also explains how to adjust digitizing settings to obtain the best results. See [Manual Digitizing](#) for details.

Fill stitches

This section explains how to select a stitch type for an object, as well as change stitch settings to obtain the best results. Fill stitch types described here include Satin, Weave, and Embossed Fill. See [Fill Stitches](#) for details.

Embroidery stamps and motifs

This section describes how to insert stamps into your design, and how to adjust them to get the results you want. It also explains how to create motif runs and fills with the built-in motif library. See [Embroidery Stamps and Motifs](#) for details.

Thread colors

This section describes how to select colors from the Color Chart and how to change background colors inside and/or outside the hoop. See [Thread Colors](#) for details.

Chapter 8

MANUAL DIGITIZING

In Digitizer EX, you build designs from basic shapes or 'embroidery objects'. Embroidery objects have certain defining characteristics or 'properties' such as color, size, position, and so on. They also have properties unique to embroidery such as stitch type and density.

Properties for the objects you create are defined as you digitize, but they can be modified at any stage. The most important property for an embroidery object is its stitch type. Different stitch types are suited to different shapes. See [Selecting fill stitches](#) for details.

This section describes how to digitize shapes with the main digitizing methods. It also explains how to adjust digitizing settings to obtain the best results.



Using digitizing methods

The process of creating embroidery objects on-screen is called 'digitizing'. Like creating designs in graphics applications, this involves the use of different 'digitizing' tools. Digitizing tools in Digitizer EX are similar to drawing tools except that the end result is an embroidery object rather than a drawing object.

Selecting digitizing methods



Use Single Run Line (Digitize toolbar) to place a row of single, triple, satin, or motif run stitches along a digitized line.



Use Turning Angle Fill (Digitize toolbar) to create Satin, Weave, and Embossed columns of varying width and stitch angle.



Use Border (Digitize toolbar) to digitize columns or borders of fixed width.



Use Parallel Fill (Digitize toolbar) to digitize closed shapes with Satin, Weave, Embossed, or Motif fills.



Use Parallel Fill Rectangle (Digitize toolbar) to digitize rectangles with Satin, Weave, Embossed, or Motif fills.



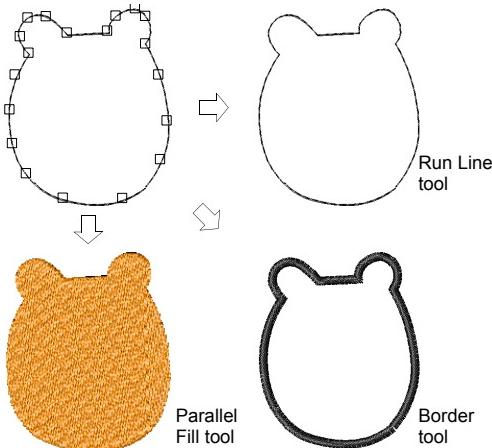
Use Parallel Fill Circle (Digitize toolbar) to digitize circles with Satin, Weave, or Embossed fills.

Different digitizing methods or ‘tools’ are suited to creating different shapes or design elements. Digitizing methods divide broadly into two categories – outline and fill. Single Run Line digitizing methods are used to digitize outlines. **Turning Angle Fill and Border** are used to create columnar shapes with differing characteristics. **Parallel Fill**, the most commonly used digitizing tool, can be used to create almost any closed shape.

Reference points and control points in EasyDesign

Once you have selected a digitizing method, you digitize shapes in the same way by marking ‘reference points’ along an outline. In general, you mark a reference point where:

- a curved outline changes curvature
- the outline has corners
- the outline changes from a straight line to curve.



You always use the left mouse button to mark a corner point, and the right mouse button to mark a curve point. Two points marked with the left mouse button are always connected with a straight line. Three points marked with the right mouse button are always connected with a curved line.

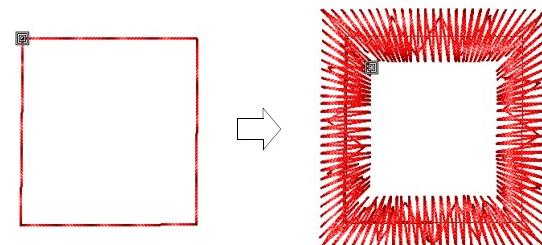
The reference points you mark when digitizing a shape become the ‘control points’ of the resulting embroidery ‘object’. Control points appear on object outlines and are used to edit or ‘transform’ objects. Such actions may include reshaping, scaling (resizing), spacing letters, changing entry and exit points. See [Modifying Designs](#) for details.



Try this! Most individual control points can be added, deleted, moved or changed to either corner or curve points. Some control points have a specific function and cannot be deleted – e.g. entry points. See [Reshaping objects](#) for details.

Digitizing lines

Use the **Single Run Line** tool to digitize lines of single or triple run stitching. This tool is typically used to add borders to designs.



Try this! Digitizer EX makes it easy to convert lines to Satin borders via the **Object Details > Line Stitch** dialog. See [Setting column width and density](#) for details.

Creating run lines



Use Single Single Run Line (Digitize toolbar) to place a row of single run stitches along a digitized line.



Use Triple Single Run Line (Digitize toolbar) to place a row of triple run stitches along a digitized line.



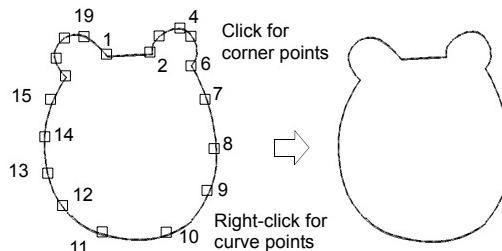
Use Motif Single Run Line (Digitize toolbar) to place a row of motif run stitches along a digitized line.

Digitize lines of single or triple run stitching with the **Single Run Line** tools. Create objects using left and right mouse clicks to mark reference

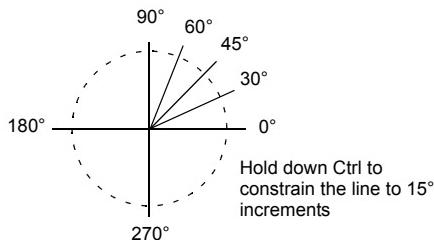
points to form an outline. Use left-clicks to enter corner points and right-clicks to enter curve points. You can change the stitch length and type in the **Line Stitch** tab of the **Object Details** dialog. Preset Single Run Line values by changing the current properties before you digitize. See [Setting current object details](#) for details.

To create Single Run Line

- 1 Click a Single Run Line icon.
- 2 Digitize the shape of the line by marking reference points.
 - ♦ Click to enter corner points.
 - ♦ Right-click to enter curve points.



- ♦ To constrain the line to 15° increments, hold down **Ctrl** as you digitize.



- ♦ For a perfect circular arc, mark three points with a right-click.
- ♦ Where curves connect – either to a straight line or another curve – click to mark the connection point.



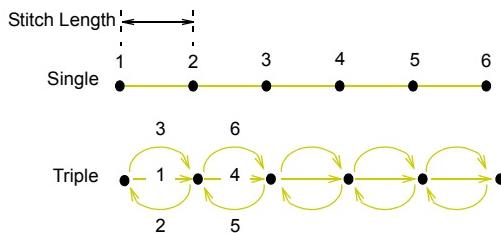
Try this! If you make a mistake, press **Backspace** to delete the last reference point, then continue digitizing.

- 3 Press **Enter** to finish digitizing the line.

Changing Single Run Line stitch type

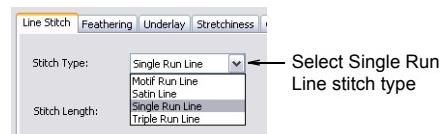
You change the **Single Run Line** stitch type in the **Object Details** dialog. You can choose run or triple run. **Single Run Line** places a single row of

run stitches along a digitized line. Triple run repeats each stitch three times for a thicker line. See also [Creating motif runs](#).



To set Single Run Line stitch type

- 1 Double-click the **Single Run Line** object. The **Object Details > Line Stitch** dialog opens.



- 2 Select Single Run Line stitch type.
- 3 Click **OK**.

Setting Single Run Line stitch length

For **Single Run Line** stitches, set the stitch length to suit the digitized shape. Where the object has tight curves, select a shorter stitch length. To reduce the stitch count for flatter curves, increase the stitch length.



Note These values only apply to objects created with the **Single Run Line** digitizing methods. They do not affect travel runs, or underlay stitching.

To set Single Run Line stitch length

- 1 Select and double-click the **Single Run Line** object.
- 2 The **Object Details > Line Stitch** dialog opens.



- 3 Enter a stitch length in the **Stitch Length** field.

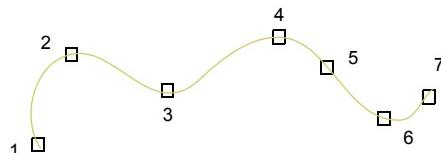


If a line has tight, sharp curves, reduce the length, for example to 1.8mm, so that the stitches follow the line.



Try this! Mimic hand-made embroidery by setting the triple run length to 4.0mm.

- Click **OK**.

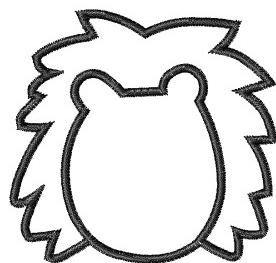


Try this! If you make a mistake, press **Backspace** to delete the last reference point, then continue digitizing.

- When you have finished digitizing the line, either:
 - Press **Enter** to keep the last stitch and place the exit point at the last point marked, or
 - Press **Spacebar** to omit the last stitch and place the exit point on the opposite side of the column.



Try this! To make a border, 'close' the shape by entering the last reference point exactly on top of the first. If the points are not exactly on top of each other, the stitches will not turn smoothly around the corner.



Creating columns and borders



Use Border (Digitizing toolbar) to digitize columns or borders of fixed width.

Digitize columns and borders of fixed width with the **Border** tool. Create objects using left and right mouse clicks to mark reference points to form an outline. Use left-clicks to enter corner points and right-clicks to enter curve points. You can leave the shape open, or create a border by joining the first and last reference points.



To create columns and borders

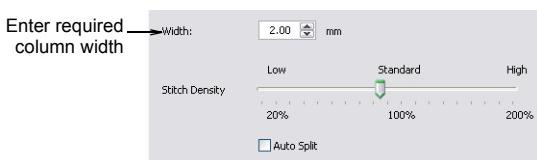
- Click the **Border** icon.
- Digitize the shape of the column by marking reference points.
 - Click to enter corner points.
 - Right-click to enter curve points.

Setting column width and density

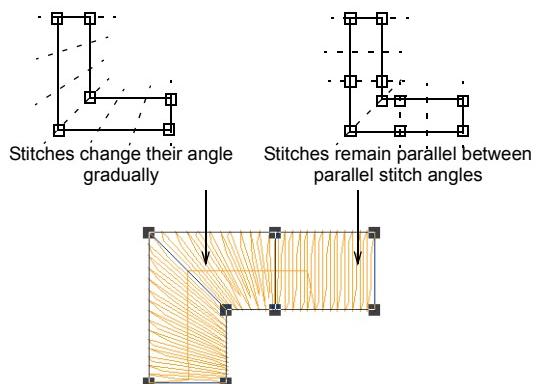
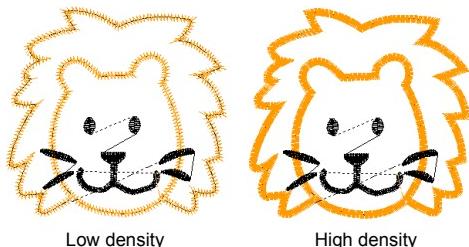
You can set the exact width of **Border** columns in the **Object Details** dialog. The value you set becomes the default width for new **Border** objects.

To set the column width and density

- Select and double-click the object (Border or Run). The **Object Details > Line Stitch** dialog opens.



- Enter a width in the **Width** field.
- Drag the slider to set the stitch density:
 - Use a lower density to give a zigzag effect.
 - Use a higher density when using thin thread.
- Click **OK**.



Digitizing columns of varying width



Use Turning Angle Satin Fill (Digitize toolbar) to create Satin fill columns of varying width and stitch angle.



Use Turning Angle Weave Fill (Digitize toolbar) to create Weave fill columns of varying width and stitch angle.



Use Turning Angle Embossed Fill (Digitize toolbar) to create Embossed fill columns of varying width and stitch angle.

Use the **Turning Angle Fill** tools to digitize columns of varying width and stitch angle. Digitized pairs of reference points define the outline, while lines connecting the pairs define the stitch angles.



To digitize columns of varying width

- 1 Click a Turning Angle Fill icon.
 - 2 Digitize the shape by marking reference points on alternate sides of the column.
 - Click to enter corner points.
 - Right-click to enter curve points.
- Mark a pair of points wherever the outline changes, and wherever you want the stitch angle to change.



Note The control points in a pair do not have to be the same type. For example, one can be a corner point, the other a curve.



Try this! If you make a mistake, press **Backspace** to delete the last reference point, then continue digitizing.

- 3 When you have finished digitizing the line, either:
- Press **Enter** to keep the last stitch and place the exit point at the last reference point you digitized, or
 - Press **Spacebar** to omit the last stitch and place the exit point on the opposite side of the column.



Try this! If you are joining two columns, omit the last stitch on the first column so that the exit point is close to the entry point of the next column.

Digitizing complex shapes with fixed stitch angles



Use Parallel Satin Fill (Digitize toolbar) to digitize closed shapes with Satin fills.



Use Parallel Weave Fill (Digitize toolbar) to digitize closed shapes with Weave fills.

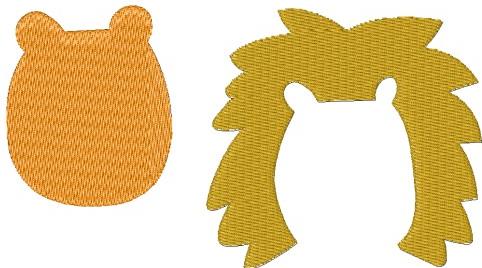


Use Parallel Embossed Fill (Digitize toolbar) to digitize closed shapes with Embossed fills.



Use Parallel Motif Fill (Digitize toolbar) to digitize closed shapes with Motif fills.

Use the **Parallel Fill** tools to digitize large and complex shapes. Most shapes can be digitized with this tool. See also [Creating motif fills](#).

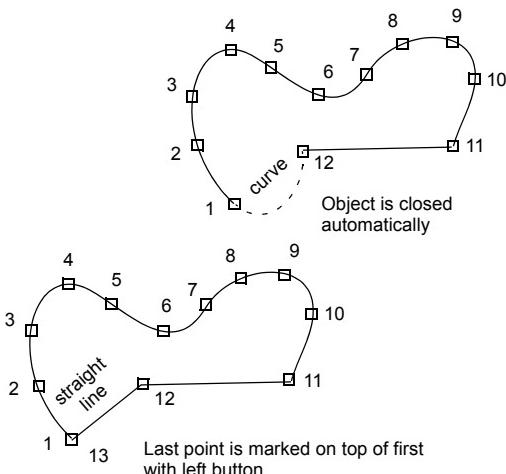


To create Parallel Fill objects

- 1 Click a **Parallel Fill** icon.
- 2 Digitize the boundary of the shape, by marking reference points around the outline of the shape.
 - ♦ Click to enter corner points.
 - ♦ Right-click to enter curve points.
- 3 Close the shape.
 - ♦ To close the shape with the same type of reference point as the last you digitized – i.e. corner or curve – simply press **Enter**.
 - ♦ To close the shape using a different type of reference point, mark the last on top of the first and press **Enter**.



Try this! Follow the prompts in the status bar to help you digitize. If you make a mistake, press **Backspace** to delete the last reference point, then continue digitizing.



Note Boundaries must not overlap.

- 4 Press **Enter**.



Note To adjust stitch angles in Parallel Fill objects, see [Adjusting stitch angles](#).

Digitizing circles



Use Parallel Satin Fill: Circle (Digitize toolbar) to digitize circles in Satin fill.

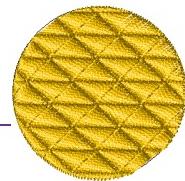


Use Parallel Weave Fill: Circle (Digitize toolbar) to digitize circles in Weave fill.



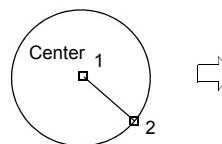
Use Parallel Embossed Fill: Circle (Digitize toolbar) to digitize circles in Embossed fill.

Digitize circles and ovals with a few clicks. You can use any fill stitch type with circles and ovals.



To digitize circles and ovals

- 1 Choose a **Parallel Fill: Circle** method from the **Digitize** toolbar.
- 2 Digitize the circle.
 - ♦ Click to mark the center of the circle or oval. A circle outline attaches to the pointer.
 - ♦ Move the pointer until the outline is the required size, then click to mark the radius reference point. This point also marks the stitch entry point. The stitch angle will be perpendicular to the line connecting the center point and the radius reference point.
 - ♦ Release the mouse button.



Digitizing squares and rectangles



Use Parallel Satin Fill: Rectangle (Digitize toolbar) to digitize squares and rectangles in Satin fill.



Use Parallel Weave Fill: Rectangle (Digitize toolbar) to digitize squares and rectangles in Weave fill.



Use Parallel Embossed Fill: Rectangle (Digitize toolbar) to digitize squares and rectangles in Embossed fill.



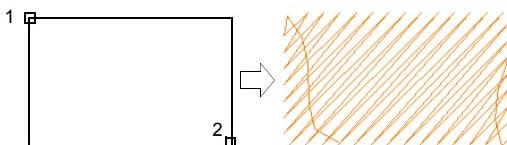
Use Parallel Motif Fill: Rectangle (Digitize toolbar) to digitize squares and rectangles in Motif fill.

Digitize squares and rectangles with a few clicks. You can use any fill stitch type with squares and rectangles. See also [Creating motif fills](#).

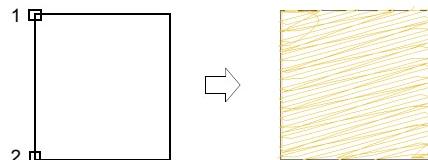


To digitize squares and rectangles

- 1 Click the **Parallel Fill Rectangle** icon.
- 2 Digitize the square and rectangle.
 - ♦ Click to mark one corner of the rectangle.
 - ♦ Drag the pointer until the outline is the required size.
 - ♦ Release the mouse button.



- ♦ To create a square, hold the **Ctrl** key down whilst dragging the pointer.



Chapter 9

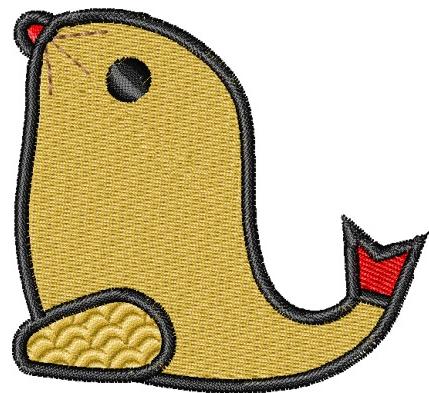
FILL STITCHES

All embroidery objects in Digitizer EX contain a defining set of settings or 'values'. The values stored with an object become its 'properties'. All objects have certain properties in common such as size and position. There are other, more specific properties of objects which depend on the object type.

The most important property of all embroidery objects is the stitch type.

Stitch properties are defined as you digitize, but they can be changed at any stage. When you create an embroidery object, you can accept the default settings for the particular digitizing method, or apply new ones. Default settings are stored in the design template. See [Object Details and Templates](#) for details.

This section explains how to select a stitch type for an object, as well as change stitch settings to obtain the best results. Fill stitch types described here include Satin, Weave, and Embossed Fill.



Selecting fill stitches

Different stitch types are suited to different objects. When you digitize an object, it uses the current stitch type for the selected digitizing method. However, you can change an object's stitch type at any stage. You can also preset the stitch type by selecting it as 'current' before

digitizing. See [Setting current object details](#) for details.

To select fill stitches

- 1 Select and double-click the object/s whose stitch type you want to change.

The **Object Details > Fill Stitch** dialog opens.



- 2 Select a fill stitch type:
 - Satin Fill: well-suited to stitching narrow columns and shapes. See [Creating Satin fills](#) for details.
 - Weave Fill: consists of rows of run stitches and is suitable for filling large, irregular shapes. See [Creating Weave fills](#) for details.
 - Embossed Fill: use to fill large areas with unique artistic effects. See [Creating Embossed fills](#) for details.
- 3 Click **OK**.

Creating Satin fills

Satin stitch is well-suited to stitching narrow columns and shapes, where the length of each stitch forms the width of the column. Satin stitches are almost parallel, with every second stitch slightly slanted. Because there are generally no needle penetrations breaking up the fill, Satin stitch creates a glossy, high-quality effect.



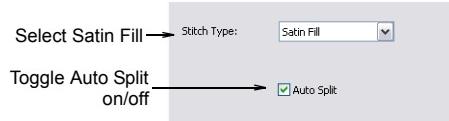
Creating objects with Satin Fill

Create Satin Fill objects with the following procedure. If a Satin shape is wide, some stitches may exceed the maximum stitch the embroidery machine can produce. When the Auto Split setting applied, EasyDesign breaks any long Satin stitches into shorter ones. It also distributes needle penetrations in a random pattern so that they do not form a line in the middle of the shape.

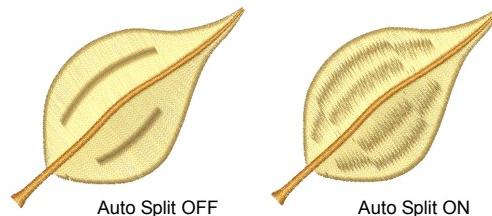
To create objects with Satin Fill

- 1 With no objects selected, click the **Object Details** icon.

The **Object Details > Fill Stitch** dialog opens.



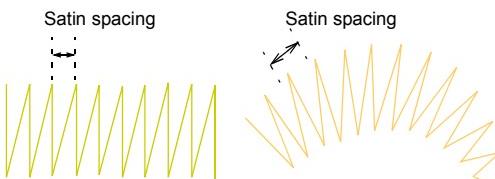
- 2 Select **Satin Fill**.
- 3 Create an object using one of the **Border** or **Turning Angle Fill** tools.



Note You can toggle Auto Split on/off for Satin objects of any object type. The feature is off by default.

Adjusting Satin stitch spacing

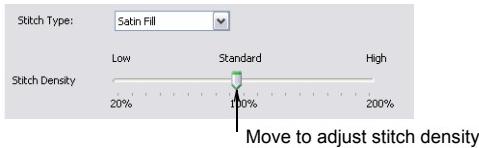
Stitch spacing is the distance in millimeters between two needle penetrations on the same side of a column. Where a column is narrow, stitches are tight, thus requiring fewer stitches to cover the fabric. Where a column is very narrow, stitches need to be less dense because too many needle penetrations can damage the fabric.



Change the stitch density in Satin fills by dragging the slider in the **Object Details** dialog. The larger the spacing between stitches, the lower the density. The smaller the spacing, the higher the density.

To adjust Satin stitch spacing

- 1 Select and double-click the **Satin** object.
The **Object Details > Fill Stitch** dialog opens.



- 2 Move the slider to adjust stitch density:
 - ◆ To increase stitch density, move the slider to the right.
 - ◆ To reduce the density for more open stitching, move the slider to the left.
- 3 Click OK.



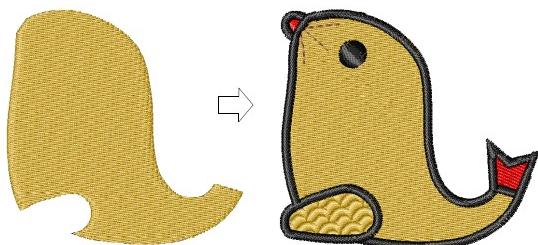
Density reduced



Density increased

Creating Weave fills

Weave Fill stitch consists of rows of run stitches and is suitable for filling large, irregular shapes. Stitches are laid in rows going back and forth across the shape. These can be parallel or slightly turning. Stitch offsets in each row are used to eliminate horizontal split lines.



You can control stitch density in Weave Fill objects by adjusting the pattern, stitch spacing and length.

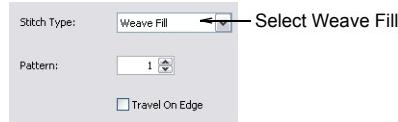
Creating objects with Weave Fill

Create Weave Fill objects with the following procedure.

To create objects with Weave Fill

- 1 With no objects selected, click the **Object Details** icon.

The **Object Details > Fill Stitch** dialog opens.



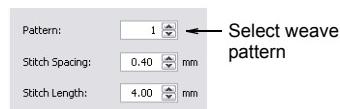
- 2 Select **Weave Fill**.
- 3 Create an object with the **Parallel Fill** or **Turning Angle Fill** tool.

Selecting Weave Fill patterns

You can select from many **Weave Fill** patterns. Generally the default size and spacing will produce the best results, but you may like to change the stitch angle.

To select a Weave Fill pattern

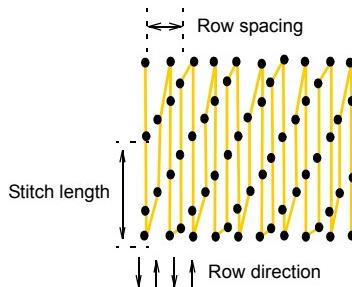
- 1 Select and double-click the **Weave Fill** object. The **Object Details > Fill Stitch** dialog opens.



- 2 Click the 'spin box' to cycle through a list of patterns, or enter the number directly into the field.
- 3 Click **OK**.

Adjusting Weave Fill stitch spacing

For Weave Fill, stitch density is determined by the distance between each row of stitches. The spacing setting is the distance between two forward rows.



To adjust Weave Fill stitch spacing

- 1 Select and double-click the **Weave Fill** object. The **Object Details > Fill Stitch** dialog opens.



- 2 In the **Stitch Spacing** field, enter the new spacing value.

This value is the distance between each forward row of stitching.

- To increase the density, enter a smaller value.
- To decrease the density, enter a larger value.

- 3 Click **OK**.



Stitch Spacing: 0.4 mm



Stitch Spacing: 0.8 mm

Adjusting Weave Fill stitch length

Specify the stitch length generated for Weave Fill objects. The stitch length varies slightly in Weave Fill fills to ensure that small stitches are not generated at the edges of the shape.

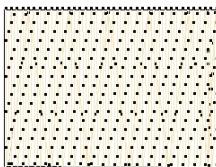
To adjust Weave Fill stitch length

- 1 Select and double-click the **Weave Fill** object. The **Object Details > Fill Stitch** dialog opens.

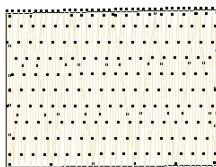


- 2 In the **Stitch Length** field, enter the stitch length you require.

- 3 Click **OK**.



Length: 2.5 mm
Minimum Stitch: 0.4 mm



Length: 4.5 mm
Minimum Stitch: 0.4 mm

Creating Embossed fills

Embossed Fill is a decorative stitch type. Use it to fill wide and large areas with unique artistic effects while keeping the appearance of a solid field of stitching.



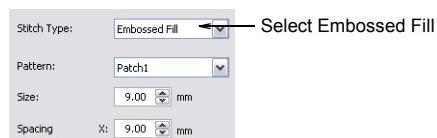
Embossed Fill needle penetrations form a tile pattern. The pattern is repeated along a grid. You can change stitch values to give an even greater variation.

Creating fills with Embossed Fill

Create Embossed Fill objects with the following procedure.

To create fills with Embossed Fill

- 1 With no objects selected, click the **Object Details** icon. The **Object Details > Fill Stitch** dialog opens.



- 2 Select **Embossed Fill**.

- 3 Create an object with the **Parallel Fill** or **Turning Angle Fill** tool.

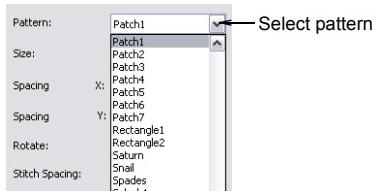
Turn on **Vizualizer** or view **Display Needle Points** to see the effect of **Embossed Fill**.

Selecting an Embossed Fill pattern

You can select from many Embossed Fill patterns. Generally the default size and spacing will produce the best results, but you may like to change the stitch angle.

To select an Embossed Fill pattern

- 1 Select and double-click the **Embossed Fill** object. The **Object Details > Fill Stitch** dialog opens.



- 2 From the **Pattern** dropdown list, select the required pattern.
A preview of the pattern appears.
- 3 Click **OK**.

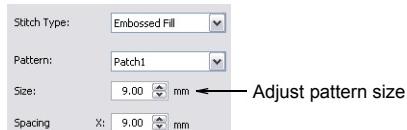
Adjusting Embossed Fill size

You can change the size of a pattern to get different effects.



To adjust Embossed Fill size

- 1 Select and double-click the **Embossed Fill** object.
The **Object Details > Fill Stitch** dialog opens.



- 2 In the **Size** field, enter the size you require.
- 3 Click **OK**.



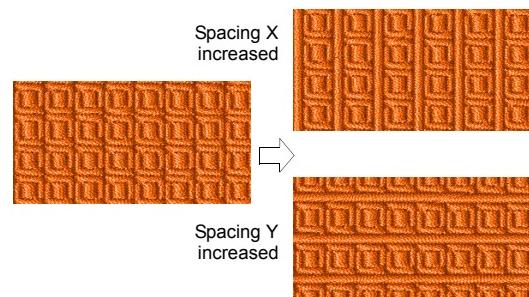
Size 7.00 mm



Size 5.00 mm

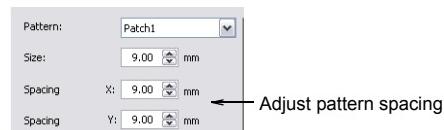
Adjusting Embossed Fill spacing

The Embossed Fill spacing setting determines the distance between patterns. You can change the horizontal (X) and vertical (Y) spacing between each repetition.

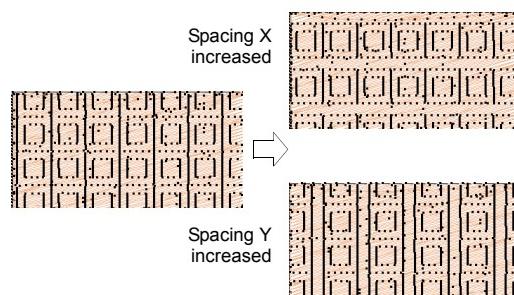


To adjust Embossed Fill spacing

- 1 Select and double-click the **Embossed Fill** object.
The **Object Details > Fill Stitch** dialog opens.



- 2 In the **Spacing** field, enter the new spacing value.
This value is the distance between each forward of row patterns. X is the horizontal and Y the vertical spacing.
 - ◆ To increase the spacing, enter a smaller value.
 - ◆ To decrease the spacing, enter a larger value.
- 3 Click **OK**.



Adjusting Embossed Fill stitch angle

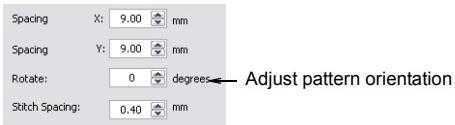
You can change the stitch angle to get the best results for each angle.



To adjust Embossed Fill stitch angle

- 1 Select and double-click the **Embossed Fill** object.

The **Object Details > Fill Stitch** dialog opens.



- 2 In the **Rotate** field, enter the rotation angle you require.
- 3 Click **OK**.



Rotation Angle 0°



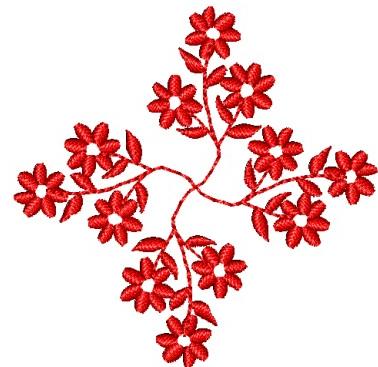
Rotation Angle 90°

Chapter 10

EMBROIDERY STAMPS AND MOTIFS

Embroidery Stamps are ready-made design elements. They generally consist of one or more simple objects made up of Run and/or Satin stitches. You use Embroidery Stamps on their own as decorative elements. Digitizer EX also provides a library of embroidery motifs which can be linked together to create ornamental runs and fills.

This section describes how to insert stamps into your design, and how to adjust them to get the results you want. It also explains how to create motif runs and fills with the built-in motif library.



Working with embroidery stamps Selecting and inserting stamps

The Embroidery Gallery provides a collection of ready-made design stamps for you to include in your embroidery designs. There are many stamps to choose from. Once added to your design, stamps can be edited, resized or transformed. They can also be used in motif runs and fills.



Note For a complete catalog of samples, see [Stamps, Motifs and Border Samples](#).



Use Embroidery Gallery (Digitize toolbar) to insert patterns (stamps) into a design.

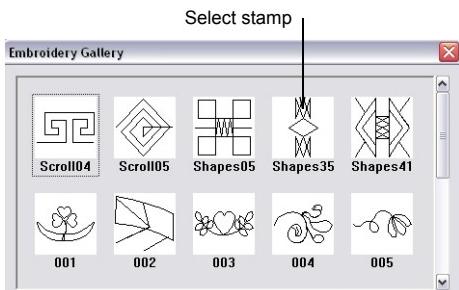
Embroidery Stamps are ready-made design elements, such as hearts, leaves or geometric patterns. Use them to create decorative effects in your designs. Rotate, scale, or mirror them as you add them or edit them like any other object.



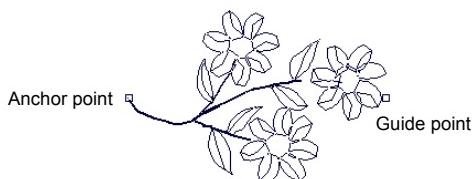
Note If a stamp is comprised of two or more objects, these will be automatically grouped when inserted.

To select and insert stamps

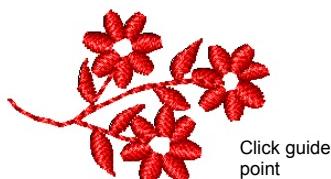
- 1 Click the **Embroidery Gallery** icon.
The **Embroidery Gallery** dialog opens.



- 2 Select a stamp.
- 3 Click **OK**.
- The dialog closes and the stamp appears with the anchor point attached to the mouse pointer.
- 4 Move the pointer to the position you want to add the stamp and click to mark the anchor.



- 5 The mouse pointer moves to the **guide point**.
- 6 Move the pointer until the stamp is in the angle you need, then click again to mark the guide.
- 7 Press **Enter**.



- 8 Repeat to insert the stamp again.



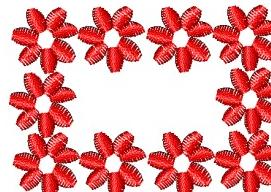
Repeat to insert

You can rotate stamps as you insert them. See [Rotating, flipping and scaling stamps](#) for details.

- 9 Press **Esc** to finish.



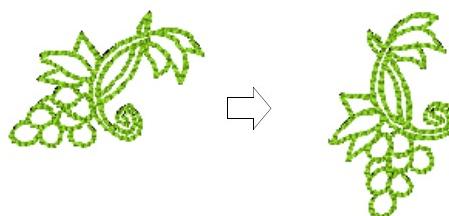
Note Each stamp is treated as a single object. To edit only a section of a stamp, ungroup the stamp.



Stamp ungrouped to use partially

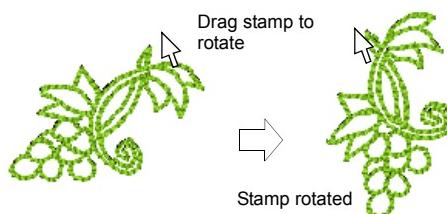
Rotating, flipping and scaling stamps

You can rotate, flip and scale stamps as you add them to your design using the keyboard and mouse. You can also scale, rotate and flip stamps later just like any other object.

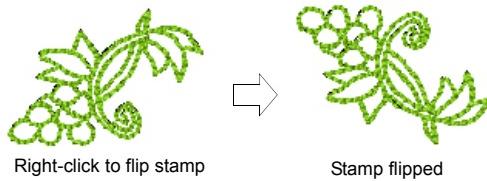


To rotate, flip and scale stamps

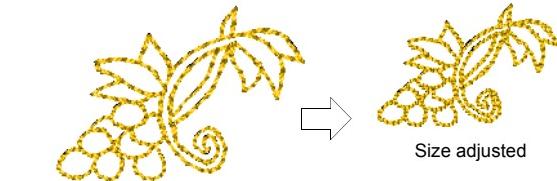
- 1 Select a stamp to insert. See [Selecting and inserting stamps](#) for details.
- 2 Move the pointer to the position you want to add the stamp, and click to mark the anchor point.
- The stamp attaches to the mouse pointer. As you move the pointer, the stamp rotates around the anchor point you marked.
- 3 Rotate the stamp with the mouse.
 - To rotate the stamp, move the pointer until the rotation angle is correct, then click again. Hold down **Ctrl** to constrain rotation angles.



- To flip the stamp, right-click.

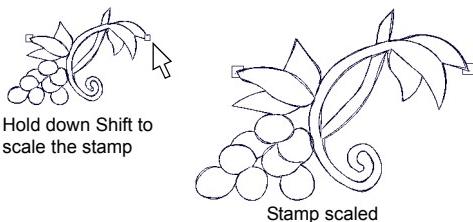


Right-click to flip stamp



Size adjusted

- To scale the stamp, press **Shift**. Move the pointer until the stamp outline shows the required size, then click again.



Hold down Shift to scale the stamp

Stamp scaled

- Press **Enter**.
- Repeat to insert the stamp again.



Try this! When flipping and scaling, make sure the stamp is at the required rotation angle, before clicking or right-clicking.

- Press **Esc** to finish.

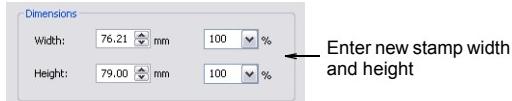
Scaling stamps to an exact size

You can set the exact size of stamps in a fill.



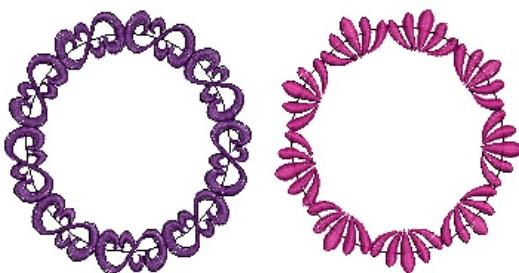
To scale stamps to an exact size

- Select and double-click the stamp object. The **Object Details** dialog opens.
- Select the **Dimensions** tab.
- In the **Dimensions** panel, enter the new dimensions of the stamp in mm or as a percentage of the original.



Creating motif runs

Motif Run is an input method that creates motif repeats along a digitized line. You can create decorative outlines using any motif from the selection list. You can modify the rotation angle, orientation and scale, and vary the space between motifs.



Creating Motif Run objects



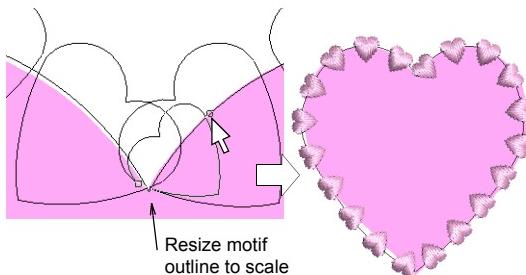
Use Motif Run Line (Digitize toolbar) to create a string of motifs along a digitized line.

Use the **Motif Run** tool to create a string of motifs along a digitized line. You can select motifs before or after digitizing. You can also adjust size and spacing settings.

To create a Motif Run object

- Select the **Motif Run** icon.
- Digitize the line along which you want the motif to appear by entering reference points.
 - Click to add a corner point.
 - Right-click to add a curve point.
- When you have finished digitizing the line, press **Enter**.

An outline of the current motif attaches to your cursor.



- To use the original size and orientation of the motif press **Enter**.
- To scale the motif, move the pointer until the motif is the required size, click, then press **Enter**.

Selecting motifs for motif runs



Use Motif Run (Digitize toolbar) to create a string of motifs along a digitized line.

You can select motifs to use before or after digitizing a motif run. If you use **Motif Run** without selecting a motif, a default will be used. To change a motif after digitizing, use the **Object Details** dialog as described here.



Note For a complete catalog of samples, see [Stamps, Motifs and Border Samples](#).

To select a motif for motif runs

- 1 Double-click a **Motif Run** object.
The **Object Details > Line Stitch > Motif Run** dialog opens.



- 2 Select a pattern from the dropdown list.

- 3 Click **OK**.

The selected Motif Run object is updated according to the motif selected.



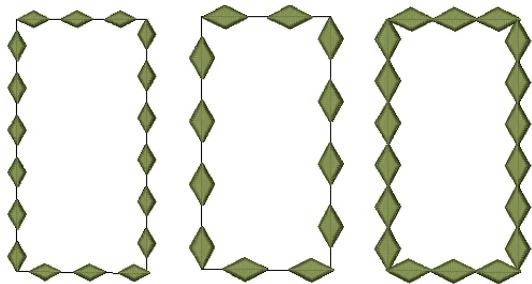
Try this! Select a motif with **no** object selected and click **OK** to make the selection current.

Sizing and spacing motifs in motif runs



Use Motif Run Line (Digitize toolbar) to create a string of motifs along a digitized line.

Set the exact size and spacing of motifs in a Motif Run via the **Object Details** dialog before or after digitizing.



To size and space motifs in a motif run

- 1 Double-click a **Motif Run** object.
The **Object Details > Line Stitch > Motif Run** dialog opens.



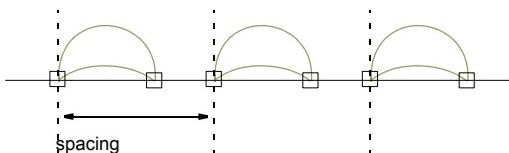
- 2 Adjust the **Size** setting to scale individual motifs in the motif run.
- 3 Click **OK**.

The selected Motif Run object is updated according to the motif selected.



Try this! You can also scale motifs as you digitize Motif Run objects. See [Creating Motif Run objects](#) for details.

- 4 In the **Spacing** field, enter the distance between each repetition of the motif.



If the motifs do not fit the digitized line exactly, EasyDesign adjusts the spacing to make them fit.



Try this! You can also reshape the baseline to achieve the exact spacing you require. See [Reshaping Motif Run objects](#) for details.

Reshaping Motif Run objects

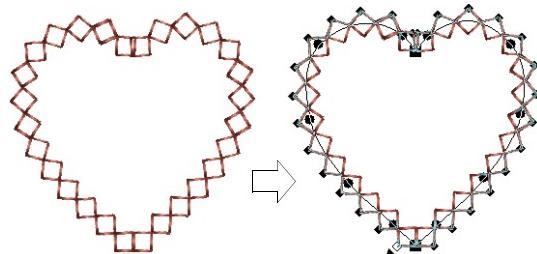


Click Reshape (Edit toolbar) to display the control points of selected objects.

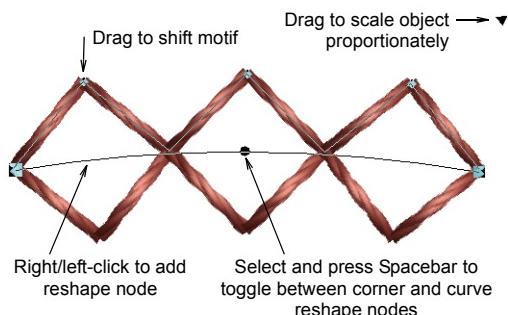
Reshape Motif Run objects in the same way as you reshape lettering objects. See also [Adjusting orientations](#).

To reshape Motif Run objects

- 1 Select a Motif Run object and click the **Reshape** icon. Control points appear around the motifs.



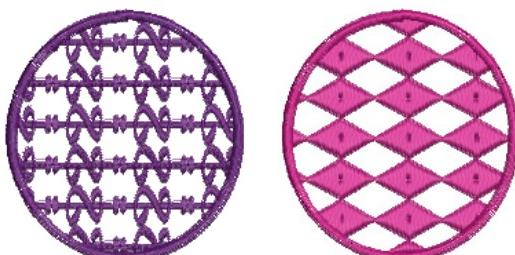
- 2 Adjust the outline and motif spacings as required:
 - ◆ Reposition and/or change reshape nodes from corner to curve.
 - ◆ Add or delete reshape nodes.
 - ◆ Click-and-drag individual motifs to adjust spacing.



- 3 Drag the proportional resize handle to scale the object proportionally.
- 4 Press **Esc** to finish.

Creating motif fills

Motif Fill is a decorative stitch used for filling closed objects. Patterns are repeated in parallel rows to fill a shape. You can design the pattern layout on-screen or by adjusting object details.



Creating Motif Fill objects



Use Parallel Motif Fill (Digitize toolbar) to create motif fills using current settings.



Use Parallel Motif Fill: Rectangle (Digitize toolbar) to create rectangular shapes filled with motif fills using current settings.

Digitize Parallel Fill objects with the **Parallel Motif Fill** tool to create decorative fill stitching using current settings. Alternatively apply it to existing Parallel Fill objects. You can select patterns, adjust settings, or change layouts at any time before or after digitizing.

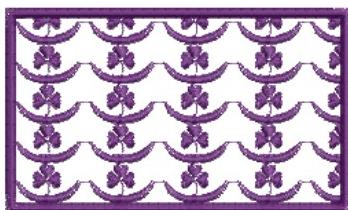


Note The stitch angle has no effect on motif layout.

To create a Motif Fill object

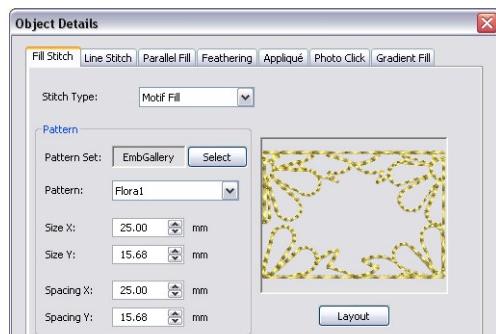
- 1 Choose a **Parallel Motif Fill** tool and digitize an object.

As soon as the entry and exit points are entered the Motif Fill stitches are generated using current settings. See also [Digitizing complex shapes with fixed stitch angles](#).

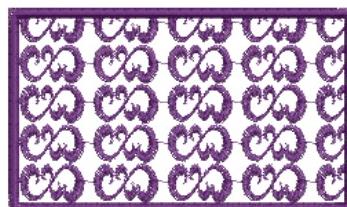


- 2 Double-click the Motif Fill object.

The **Object Details > Fill Stitch > Motif Fill** dialog opens.



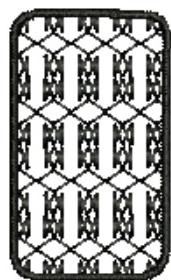
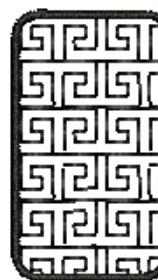
- 3 Click **Select** to change pattern sets as required. See [Adjusting motif fill settings](#) for details.
- 4 Select a pattern from the dropdown list and click **OK**. The selected Motif Fill object is updated.



Try this! Select a motif with **no** object selected and click **OK** to make the selection current.

Adjusting motif fill settings

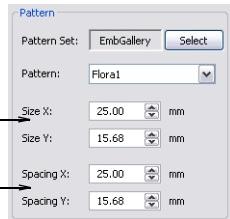
You can insert a motif fill at its original size and spacing, and then adjust settings later. You can also set the exact size and spacing as you insert the pattern fill. Spacing is the distance between each pattern repetition.



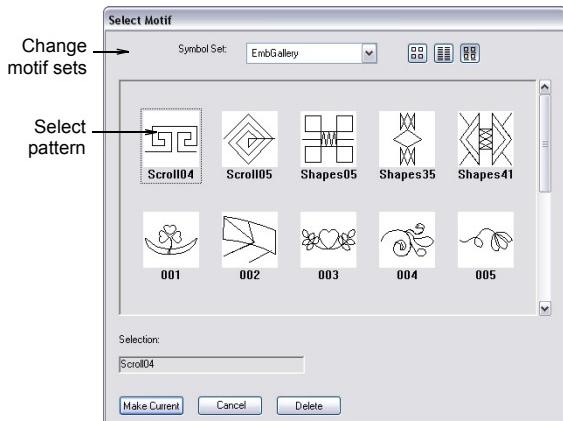
Try this! Blackwork gets its name from the black silk thread traditionally used in this form of embroidery. Use the special **Blackwork Fill** pattern set to create interesting scrolling or geometric patterns.

To adjust motif fill settings

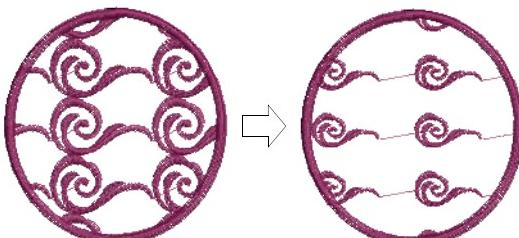
- 1 Double-click a Motif Fill object. The **Object Properties > Fill Stitch** dialog opens with the current pattern in the preview panel.



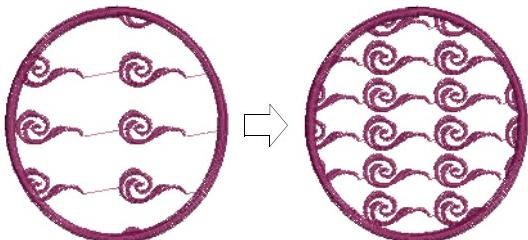
- 2** Click **Select** to change pattern sets as required. The **Select Motif** dialog opens.



- 3** Select a motif set from the **Symbol Set** dropdown as required – e.g. Black Work.
4 Select a pattern from the library and click **Make Current**.
5 Adjust **Size X** and/or **Size Y** settings as required to set motif width and height.



- 6** Adjust **Spacing X** and/or **Spacing Y** as required to set spacings between motifs.



Try this! The Preview panel responds to any adjustments to Size X, Size Y, Spacing X and Spacing Y fields, providing you with a preview of the new shape.

- 7** Click **OK**.

The digitized object is filled with the selected motif fill, current settings applying.



Note If more than half a motif is outside the boundary, it will be clipped along the boundary.

Laying out motif fills on-screen

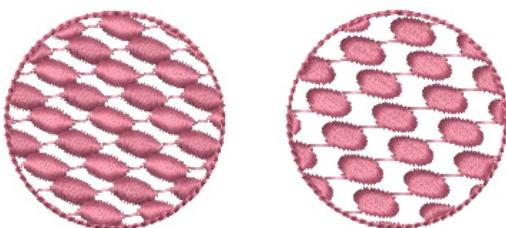


Use Parallel Motif Fill (Digitize toolbar) to create motif fills using current settings.



Use Parallel Motif Fill: Rectangle (Digitize toolbar) to create rectangular shapes filled with motif fills using current settings.

Lay out motif fills on-screen by using 'guide motifs' to scale, space, transform and offset the entire motif fill. There are three blue guide motifs. Other sample motifs appear in yellow. Each guide motif lets you change different elements of the layout. When you change a guide motif, all motifs in the fill change accordingly.

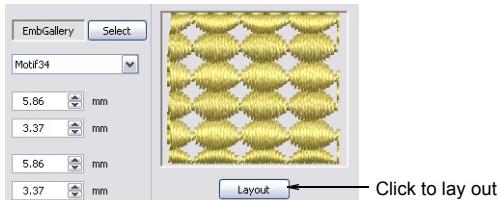


Try this! You can also change the position, size and orientation of Motif Fill objects by moving, scaling and transforming them as you do any other embroidery object. See [Arranging and Transforming Objects](#) for details.

To lay out motif fills on-screen

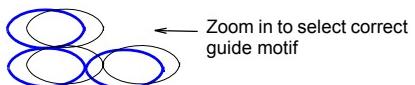
- 1 Digitize a Motif Fill object from scratch or double-click an existing one. See [Creating Motif Fill objects](#) for details.

The **Object Details > Fill Stitch > Motif Fill** dialog opens.



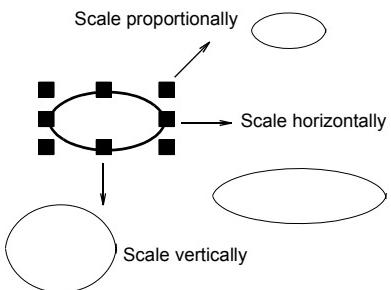
2 Click Layout.

Sample and guide motifs appear in the design window. When you change a guide motif, all motifs in the fill change accordingly.

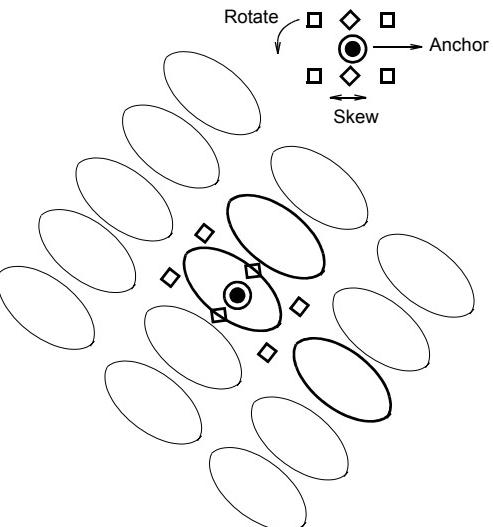


- 3 Zoom in and adjust selected guide motifs to achieve the effect you require.

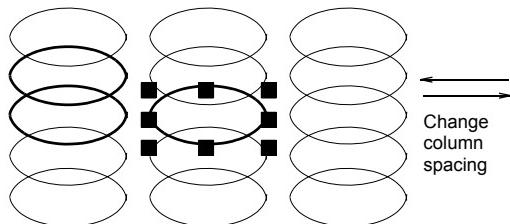
- Use top guide motif to change row spacing, row offset, and to scale motifs.
- Use middle guide motif to move, rotate, skew, and scale motifs.
- Use side guide motif to change column spacing, and to scale motifs.



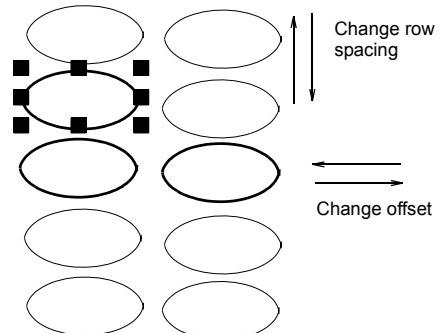
- Rotate motifs by clicking the middle guide twice to display the rotation handles. Click a corner handle and drag to rotate.
- Skew motifs by clicking the middle guide twice, then dragging the skew handles.



- Change column spacing by selecting the side guide and dragging it left or right.



- Change row spacing by selecting the top guide and dragging it up or down.
- Change row offset by selecting the top guide and dragging it left or right.



4 Press Enter to finish.

The size and layout settings you select become the current Motif Fill settings.

Chapter 11

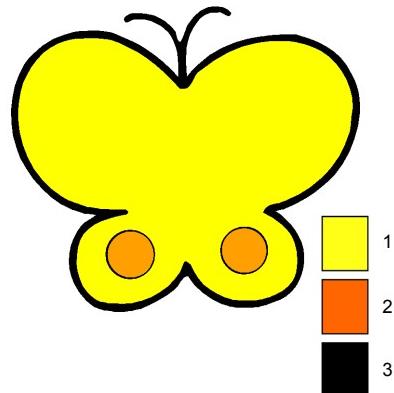
THREAD COLORS

When you digitize, you select thread colors for each object you create from the Color Chart. New objects are digitized using the selected color. Digitizer EX lets you manage the thread colors in your Color Chart. Select from a wide range of commercial thread charts. In Digitizer EX, you can set the color inside the hoop to match the color of the fabric you intend to stitch out on.

Background colors are treated as design details and are saved with the design.

You need to decide how many different thread colors to use and the sequence in which they will be stitched. When you digitize, you select thread colors from the color palette. Wherever possible, simplify the design to reduce the number of color changes. Always start with the shapes at the back and work your way forward, layer by layer.

This section describes how to select colors from the Color Chart and how to change background colors inside and/or outside the hoop.



Managing thread colors

The Color Chart has up to 128 color slots. New objects are digitized using the currently selected color. You can change color before or after digitizing. Digitizer EX also lets you manage the thread colors in your Color Chart. Select from a wide range of commercial thread charts. Adjust the

exact number of colors in the Color Chart as required. Add extra slots as required.



Try this! When you insert one design in another, the two Color Charts are merged.

Selecting a new current color



Click Current Color (Digitize toolbar) to open the Color Chart.

When you digitize a new object, it automatically takes the color selected in the Color Chart. This is the 'current' color.

To select a new current color

- 1 Deselect all objects.
- 2 Access the Color Chart by one of the following means:
 - Click the Current Color icon on the Digitize toolbar.
 - Select the **View > Color Chart**, or
 - Press the shortcut **Ctrl + R**.
- 3 Hover the mouse pointer over a color to view its brand, code and description in a tooltip.



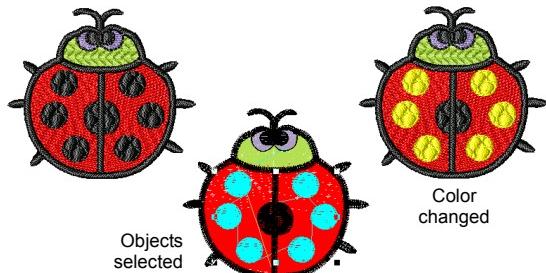
- 4 Select the color you want.
This then becomes the current (default) color.

Recoloring selected objects

Change the color of one or more selected objects in your design at any time. You can select all objects of the same color with a single command. Use this feature to apply a change across all objects of the same color. See [Viewing design objects by color](#) for details.

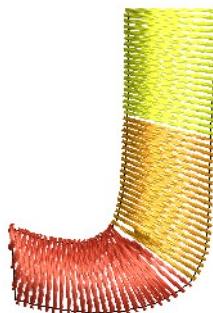
To recolor a selected object

- 1 Select the object (or objects) you want to recolor.
- 2 Select a color from the Color Chart.
The objects appear in the new color. The current color does not change.



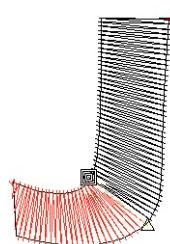
Inserting manual color changes

Digitizer EX lets you insert a color change on any desired stitch in EasyDesign. A color change of any selected color is inserted at the current cursor position. This is particularly useful when working with monograms or other lettering objects, including individual characters. You can remove manually inserted color changes at any time. See also [Recoloring letters on-screen](#).

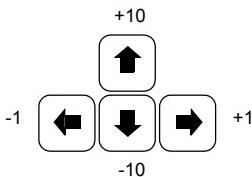


To insert a manual color change

- 1 Press **Esc** to deselect all objects in the design and deactivate the **Stitch Select While Traveling** tool.
- 2 Use any of the available tools to travel through the design by object or color. See [Traveling through the stitching sequence in EasyDesign](#) for details.

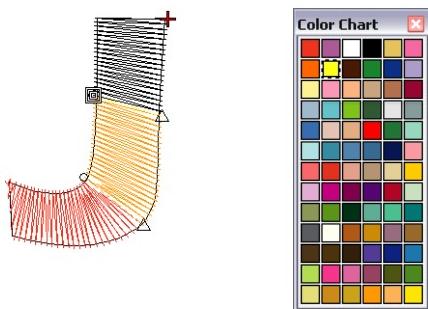


- 3 Use the arrow keys to locate the individual stitch within the object where you want to place the color change. See [Traveling by stitches](#) for details.

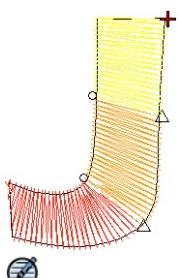


Note If you travel by color or by object only, the stitch cursor will always be at the beginning of an object. Inserting a manual color change at this point will change the entire object's color property.

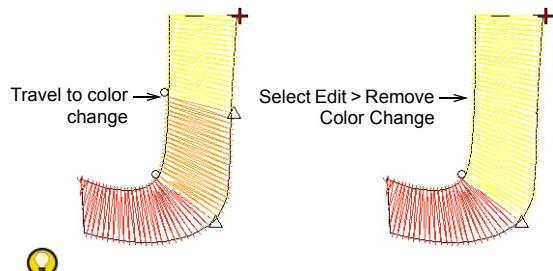
- 4 Select the color you want from the Color Chart. A color change is inserted at the current stitch cursor location.



- 5 Repeat as many times as required.



Note The **Edit > Remove Color Change** command is enabled when the stitch cursor is positioned on a stitch carrying a manual color change. Selecting the command removes the color change.



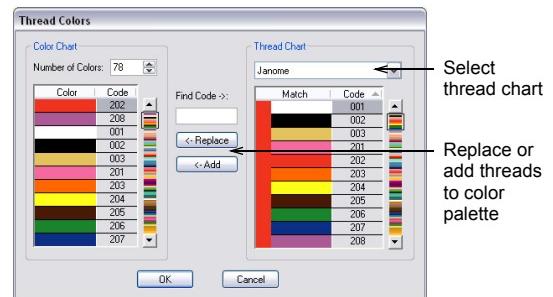
Try this! Alternatively, select the entire object and select a color from the Color Chart. The entire object reverts to the chosen color.

Setting up thread charts

Digitizer EX lets you manage the thread colors in your Color Chart. Select from a wide range of commercial thread charts. Add or remove colors – you can assign up to 128 color slots. Find and sort specific colors by Color Code. Adjust the exact number of colors required – e.g. if you are only using six colors in your design, limit the number of colors displayed in the Color Chart to those six. Add extra slots as required.

To set up a thread chart

- 1 Access the **Thread Colors** dialog by one of the following means:
 - ♦ Select **Setup > Thread Colors**, or
 - ♦ Right-click a color on the Color Chart.



- 2 Select a thread chart from the **Thread Chart** dropdown list.
- 3 Locate the color you want to use by scrolling down the list.



Try this! If you know the exact code of the color you are looking for, key it into the **Find Code** field.

- 4 Use one of the following buttons to transfer the selected color to the Color Palette:
 - ♦ Replace: the color will replace the currently selected color in the Color Palette list. Double-clicking a thread in the Thread Chart list has the same result.
 - ♦ Add: the color will be appended to the Color Palette list. The **Number of Colors** field will increase by one automatically.



Note If a color in the Color Palette has been used by one or more objects in the current design, a tick will be displayed in the center of the color field of the Color Palette list.

Part III

DIGITIZING WITH ARTWORK

There are two broad categories of artwork file, both of which can be imported into EasyDesign for use as digitizing backdrops – [vector](#) and [bitmap](#). To create good quality embroidery, you need to choose or create suitable artwork of either format.

Digitizing with backdrops

This section describes how to scan it into Digitizer EX and edit it before use as a digitizing backdrop. It also describes how to insert into Digitizer EX and save bitmap images, as well as how to show and hide them as you digitize. Editing images in external graphics packages is also covered. See [Digitizing with Backdrops](#) for details.

Preparing images for automatic digitizing

This section describes how to prepare both outlined and non-outlined images for automatic digitizing. See [Preparing Images for Automatic Digitizing](#) for details.

Automatic digitizing

This section describes how to automatically convert bitmap images to embroidery objects and complete designs, as well as how to create embroidery from grayscale images. See [Automatic Digitizing](#) for details.

Chapter 12

DIGITIZING WITH BACKDROPS

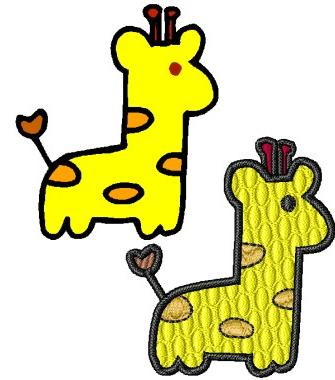
Artwork can be inserted, pasted or scanned into Digitizer EX for use as digitizing templates or 'backdrops'.

This section describes how to scan it into Digitizer EX and edit it before use as a digitizing backdrop. It also describes how to insert into Digitizer EX and save [bitmap](#) images, as well as how to show and hide them as you digitize. Editing images in external graphics packages is also covered.

Backdrops can help you to:

- Digitize shapes manually.
You trace shapes and lines over the [artwork](#) using the appropriate input methods. Using a [bitmap](#) image in this way is like using an enlargement drawing and digitizer tablet, except that everything is done on-screen. See [Manual Digitizing](#) for details.
- Digitize shapes automatically with **Click-to-Stitch**.
You select a shape and **Click-to-Stitch** automatically determines the required stitches. See [Digitizing images automatically with Click-to-Design](#) for details.
- Digitize complete images automatically with **Click-to-Design**.

You select the image and **Click-to-Design** automatically determines the shapes and stitches needed to digitize the design. See [Creating embroidery designs with Click-to-Design Advanced](#) for details.



From within Digitizer EX you can open images in **Paint**, **Corel PhotoPaint**, or **Paint Shop Pro**. Images updated in this way are automatically re-imported into Digitizer EX.

Choosing suitable artwork

For both manual and automatic digitizing purposes, 'clean' images, sometimes referred to as 'cartoons', work best. Such images have a limited

number of solid colors which in turn have well-defined outlines. Ideally, they are:

- well defined, where each shape is made up of pixels of the same color
- clearly 'blocked', where each shape is a stitchable size, at least 1 sq mm
- saved at a color depth of at least 256 colors (8 bit), or preferably millions of colors (16 bit). (Images are automatically reduced to 256 colors or less when loaded into Digitizer EX.)



Clean picture with well-defined outlines



Clean picture with well-defined color blocks



Complex picture, needs editing to remove background and clean color blocks

Digitizer EX automatic digitizing techniques – **Click-to-Design** and **Click-to-Stitch** – produce best results with images of the type found in clipart libraries or created from scratch in a graphics package. Automatic digitizing can work with images from other sources but they require some preparation. This is because most commonly available images are **not** made up of solid colors. Scanners introduce noise, while graphics packages perform 'dithering' and 'anti-aliasing' to improve image print quality.

Automatic digitizing works least effectively with photographic images which may contain many dithered colors and complex forms. With photographs, however, you can pick out shapes that you want to embroider, leaving out unnecessary detail.

Scanned images

Images scanned from hardcopy drawings or existing embroidery typically contain a lot of introduced 'noise'. While they can be used as input to automatic digitizing, once again, best results are achieved with relatively clean images consisting of solid color blocks. Typically, logos and simple drawings scanned from business cards, letterheads, books, magazines, cards fall into this category.

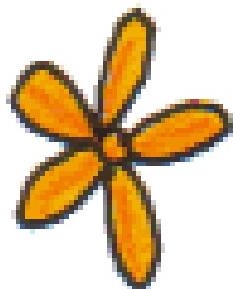
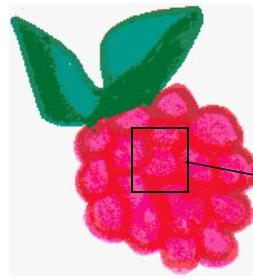


Image containing a lot of scanner 'noise'

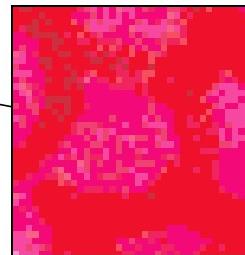
Noisy images typically need to be prepared by reducing the color count and sharpening the outlines. See [Image preparation techniques](#) for details.

Dithered images

Dithering is a software technique which combines existing colors in a checkerboard arrangement of pixels. It is typically used to simulate colors that are missing from an image palette.



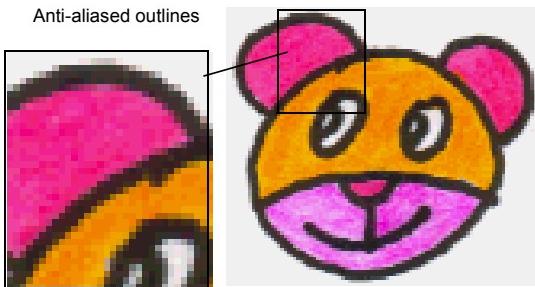
Dithered color blocks



Like noisy images, dithered images need to be color-reduced before use. Be aware, however, that while the software is excellent at processing dithered colors within a defined outline, it does not work so well with non-outlined images. See [Preparing Images for Automatic Digitizing](#) for details.

Anti-aliased images

Anti-aliasing is a software technique similar to dithering which is used to soften hard outlines where color blocks intersect. It produces smoother outlines by 'blurring' the pixels where colors join.



Where anti-aliasing is deliberately used to blur outlines, these need to be 'sharpened' before use with automatic digitizing. See [Preparing Images for Automatic Digitizing](#) for details.

Scanning artwork into Digitizer EX

If you have existing [artwork](#), you can scan it with a TWAIN-compatible scanner using the Digitizer EX scanning function. It is important to scan your artwork properly if you intend to use one of the automatic digitizing techniques; the scanned image quality will affect the quality of the final embroidered design.

Preparing artwork for scanning

With embroidery design, less is more. You do not need every detail in an image to create a design. You use the 'structure' of the image rather than the fine details of texture and color. To simplify artwork, you can cover it with tracing paper and draw only the essential shapes and lines which will be filled with stitches. When scanning, take away the original artwork and put white paper behind the tracing paper. Shiny surfaces, such as glossy photographs, may not scan well. Cover them with tracing paper. If the artwork has very light colors, highlight outlines with a fine black felt-tip pen.

Scanning resolution

Most scanners require you to enter scanning resolution information. Resolution determines the number of dots per inch (dpi) used to create a drawing. The higher the value, the clearer the image but larger the file. For digitizing purposes, use a maximum resolution of 300 dpi (dots per inch). A resolution of 72dpi (screen resolution) will usually be sufficient. Generally speaking, the

smaller the source image and/or more detail it contains, the higher the resolution needs to be. Use the following table as a guide.

Type of artwork	Scanning resolution
Business cards, letter heads	150 - 300 dpi
Hand sketches	150 - 300 dpi
Photos and images	150 - 300 dpi
Commercial art, line drawing	72 - 150 dpi

Color mode

Most scanners also require you to enter color mode information. First decide whether your image is line art (black and white drawing), sketch, color picture, or black and white or color photograph, then choose an appropriate mode. Black and white mode produces the smallest files. Color photograph and grayscale modes generate 256 color images and produce similar sized files. 'RGB', 'True Color' or 'millions of colors' modes generate 16.7 million colors and produce the biggest files. Use the table below to decide which mode is suitable for use with your image.

Source image	Example	Descrip.	Recom. color mode *	Colors in image
Line art		Two colors - usually black and white	Black / white drawing Line art	2
Drawing		Sketch or drawing with shades of gray	Gray-scale Line art	256
Color picture		Two colors or more	Color RGB Millions of colors Color drawing	16 million 16 million 2 - 256

* Different scanning software uses different terms for the same mode.

Scanning tips

Here are some tips when scanning [artwork](#) for use as digitizing backdrops:

- Do not scan line art images in grayscale mode; grayscale scanning produces fuzzy edges.
- Scan color images in RGB mode (millions of colors) rather than 256 color mode. You may not notice any difference on screen. In fact the 256 color image may look better than the RGB image. However, Digitizer EX converts all images to 256 colors or less upon loading. It uses the extra information to produce a better image than if it was originally scanned at 256 colors.



Scanned in 256 color mode



Scanned in RGB color mode (millions of colors)

- Do not scan color images in CMYK mode as this is only used for images that will be printed and the colors may be different from RGB colors.
- If the image needs to be resized, scale it when you scan it. Scaling afterwards may distort the image.

Sharpening

Some scanning software lets you apply what is called 'sharpening' as you scan. Sharpening compensates for the slight blurring in a scanned image by looking for any differences between colors in the image. Sharpening accentuates these differences which makes the image edges more defined. It does not increase the image details; it just makes them more obvious. In general, use sharpening with images that have well-defined outlines. Do not use it with non-outlined images.



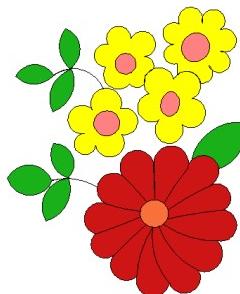
Scanned with sharpening



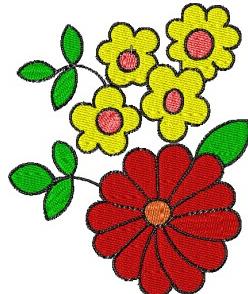
Scanned without sharpening

Importing images into Digitizer EX

[Bitmap](#) images can be inserted, pasted or scanned into Digitizer EX for use as digitizing backdrops. For both manual and automatic digitizing purposes, 'clean' images, sometimes referred to as 'cartoons', work best. Scanners introduce noise, while graphics packages perform 'dithering' and 'anti-aliasing' to improve image print quality. See [Preparing Images for Automatic Digitizing](#) for details.



Traced image scanned



Auto-digitized

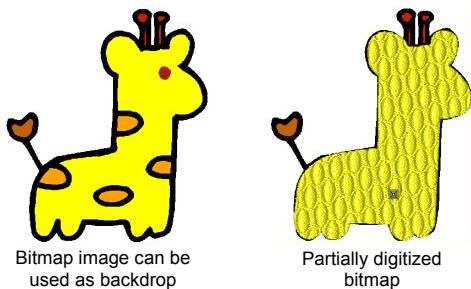


Try this! You can scale and transform images after importing, but it is generally better to do so during scanning. Scaling afterwards may distort the image.

Inserting images

Use [Insert Image](#) ([Image menu](#)) to insert an image for use as a backdrop.

You can load bitmap images of various formats for use as digitizing backdrops. See also [Choosing suitable artwork](#).

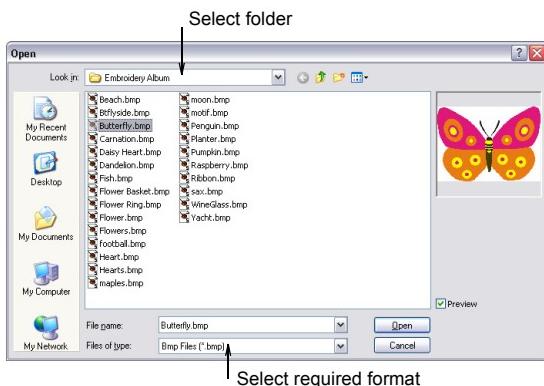


Note Vector drawings are converted to bitmap images when loaded into Digitizer EX.

To insert an image

- Select **Image > Insert Image**.

The **Open** dialog opens.



- Select a folder from the **Look In** list.
- Select a file type from the **Files of Type** list – e.g. BMP.
- Select the file you want to insert.
- Click **Open**.



Try this! Select the **Preview** checkbox to preview the selected file.

Copying and pasting images



Click **Paste** (Standard toolbar) to paste copied images in the design.

You can copy and paste an image into EasyDesign by copying it from another embroidery design or

graphics application, and pasting it into your design.



Note You cannot copy and paste an image into EasyEdit.

To copy and paste an image

- Select the image you want to copy and paste.
- Copy it to the Windows clipboard by pressing **Ctrl + C**.
- Create a new file in EasyDesign or open the design file into which you want to insert the image.
- Click the **Paste** icon or press **Ctrl + V**.
The image is pasted into the design.



Note You may need to resize the image to fit within the dimensions of the selected hoop. See [Scaling objects using Object Details](#) for details. See also [Editing images in graphics applications](#).

Scanning bitmap images

Use **Scan** (Image menu) to scan an image into Digitizer EX.

You can scan images directly into Digitizer EX for use as digitizing backdrops. The scanning feature in Digitizer EX allows you to use most TWAIN-compatible scanners. You can use any scanning software provided that it can save the image in one of the compatible formats. See also [Scanning artwork into Digitizer EX](#).

To scan a bitmap image

- Set up your scanner. See [Setting up scanners](#) for details.

- 2 Prepare the artwork for scanning. See [Preparing artwork for scanning](#) for details.
- 3 Start Digitizer EX.
- 4 Create a new file or open a design you want to insert the drawing into.
- 5 Select **Image > Scan**.
Your scanning program will open.
- 6 Choose a scanning mode and resolution. See [Scanning resolution](#) and [Color mode](#) for details.
- 7 Preview the image in the scanning program.
- 8 Select the area to be scanned and scan the image.
- 9 Scan the artwork.
- 10 Save the scanned image in a third-party application. See [Editing images in graphics applications](#) for details.
Save in a compatible format image file to the C:\Embroidery Gallery folder.

Editing imported images

For both manual and automatic digitizing purposes, you may want to crop an image before digitizing. You can do this within Digitizer EX or using a third-party graphics application. Sometimes, you may want to save backdrops as separate files after scanning or cropping.

Cropping images for digitizing

Use **Crop Image** (Image menu) to crop an image for use with Photo Click.

Digitizer EX allows you to crop images prior to use. Before using bitmap images for design purposes, crop them to remove unnecessary detail and save processing time. This feature is primarily intended for use with the Photo Click tool. See [Creating embroidery from photographs](#) for details.



Warning With cropped images, the Photo Click tool produces stitches only in the visible areas of the image. However, cropped images may produce unexpected results when used with Click-to-Stitch or Click-to-Design tools. In this case, the solution is to edit the image in a third-party graphics application and remove the unwanted areas of the image altogether. See [Editing images in graphics applications](#) for details.

To crop an image for digitizing

- 1 Scan or load the image you want to use. See [Importing images into Digitizer EX](#) for details.
- 2 Select the image and a cropping tool:
 - ♦ Select **Image > Crop Image > Rectangle** and click and drag a bounding box around the area to crop.



- ♦ Select **Image > Crop Image > Freehand Shape** and mark reference points to crop the image in free form using right- and left-clicks.



Digitizer EX crops the area inside the cropping selection.

Reshaping cropped images



Click **Reshape** (Edit toolbar) to display the control points of cropped areas.

After an image has been cropped, you can reshape and transform the cropping outlines in the same way as you reshape and transform lettering. You can also use the tool to reposition cropping outlines.

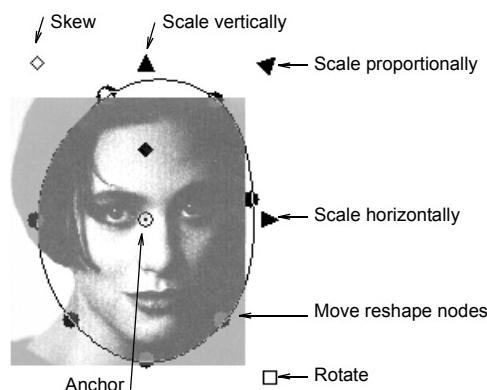
To reshape cropped images

- 1 Crop an image. See [Cropping images for digitizing](#) for details.
- 2 Select the cropped image.



3 Click the Reshape Object icon.

The cropping outline is displayed with reshape nodes.



Try this! Experiment with sizing handles, skew and rotation handles. Note the rotation anchor point can't be moved. See also [Arranging and Transforming Objects](#).

4 Adjust reshape nodes to change the shape.



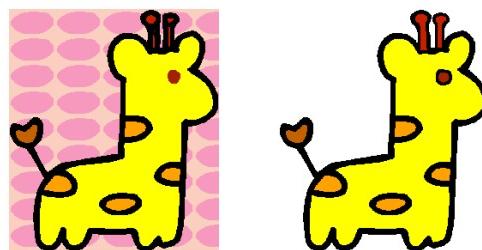
Note Reshape nodes can't be deleted, added or changeable between corner and circular points. See also [Reshaping objects](#).

5 Press Esc to finish.

Editing images in graphics applications

Use Touch Up Picture (Image menu) to edit images in a graphics package.

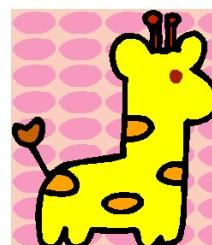
Sometimes you need to edit images directly in a third-party graphics package. You would normally do this in order to eliminate backgrounds, flood-fill solid areas with color, or add outlines, close gaps, or reinforce outlines. From within Digitizer EX you can open images directly in **Paint**, **Photopaint**, or **Paint Shop Pro**. Images updated in this way are automatically re-imported into Digitizer EX.



There are many graphics packages which can help you improve your scanned images. At one end of the spectrum there is the simple **Paint** program. This comes free with Windows but can handle few formats or color conversions. At the other end, there are professional tools such as **Photopaint**. Such programs can do almost anything but may be too expensive for occasional use. A compromise is **Paint Shop Pro** which has many of the features of the high-end tools but at a much lower cost.

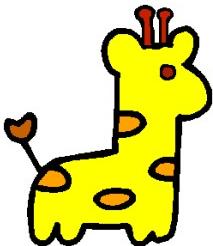
To edit an image in a graphics application

- 1 Select **Image > Insert Image** to load an image.
- 2 Select the image.



Background may be cleaned, eye area outlined and antlers edited

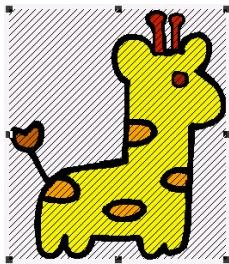
- 3 Select **Image > Touch Up Picture** and select a graphics package.
The image opens in the graphics package.
- 4 Edit the image and save.



Background cleaned and eye outlined

5 Select File > Update <Filename>.

The image displays in Digitizer EX overlaid with stripes. This means that it is still open in the graphics package.



File still open in the graphics package



Try this! Select File > Exit & Return <Filename> to exit the graphics package and show the updated image in Digitizer EX. The stripes will disappear.

Chapter 13

PREPARING IMAGES FOR AUTOMATIC DIGITIZING

Digitizer EX supports the automatic and semi-automatic digitizing of both **bitmap** images and **vector** drawings. The quality of the resulting designs greatly depends on the type and quality of the original **artwork**. Generally speaking, vector drawings preserve the picture quality when resized, whereas bitmap images cause problems of pixilation and image degradation when enlarged or scaled down. However, any scaling required should be done before importing into EasyDesign as the importing operation automatically transforms vector drawings into bitmaps. In order to make bitmap images more suitable for automatic digitizing, Digitizer EX also provides image processing capabilities and links to graphics packages.

This section describes how to prepare both outlined and non-outlined images for automatic digitizing.

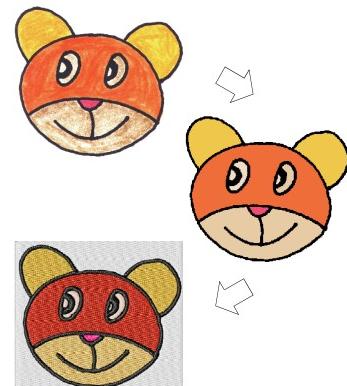


Image preparation techniques

Before applying automatic digitizing, you frequently need to improve or 'clean up' **artwork**. To work effectively, both **Click-to-Design** and **Click-to-Stitch** require solid color images as input. You can improve artwork both with **bitmap** editing tools in graphics packages and/or the image processing tools provided in Digitizer EX. In

fact, the software will not let you apply **Click-to-Design** until the image has been suitably processed. Preparing images for automatic digitizing.

Outlined vs non-outlined images

Before preparing your image you need to know what type you are using. For the purposes of automatic digitizing, there are two categories – outlined and non-outlined. Outlined images ideally

have a solid black outline around each colored area. Non-outlined images ideally consist of solid areas of color. Outlined and non-outlined images require different methods of preparation.



Image without outlines

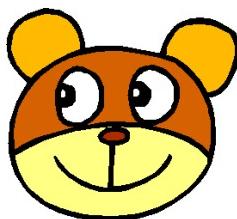


Image with outlines

Image clean up

In practice, cleaning up scanned images may involve any one or a combination of the following techniques:

- reducing the number of colors
- adding or emphasizing outlines
- removing noise, dithering or anti-aliasing
- eliminating unnecessary detail
- cropping sections
- eliminating backgrounds.

See also [Choosing suitable artwork](#).

Color reduction

Sometimes an image looks clean but extra colors have been introduced during scanning or in a graphics package. Color reduction means reducing the actual **number** of image colors in order to eliminate unnecessary detail and reduce each block to a single color. Color reduction also cleans the image, removing noise and anti-aliasing if present. This in turn helps minimize the number of trims and color changes required in the resulting embroidery design. Reduce colors in a non-outlined image using the **Image Preparation** tool and in an outlined image using the **Outlined Image Preparation** tool.

Color reduction should only be applied if the loss of detail does not affect the image shapes. Before color reduction, the colored areas in the image below include many colors. After reduction, each area is reduced to a single color. The detail is preserved.

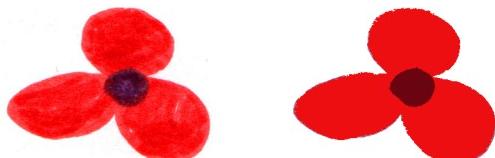


Image before color reduction

Image after color reduction

If you are scanning images, make sure you scan them correctly for best results. See also [Scanning artwork into Digitizer EX](#).

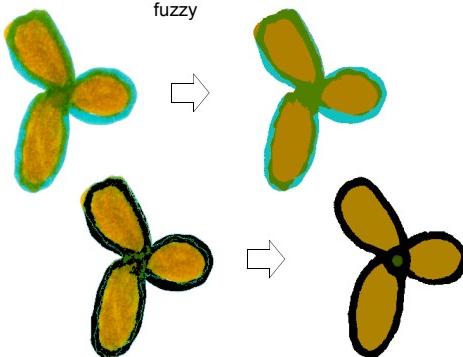


Image scanned in RGB color mode, then colors reduced to 8

Image scanned in 256 color mode, then colors reduced to 8

Be aware that the **Image Preparation** tool is good at removing noise and anti-aliasing but not so good at processing dithering in non-outlined images. By contrast, the **Outlined Image Preparation** tool is excellent at processing dithered colors as it averages all pixels within a defined outline. See also [Inserting images](#).

Image Preparation tool used with non-outlined image – dithered color blocks not completely cleaned, edges fuzzy



Outlined Image Preparation tool used with outlined image – dithered color blocks cleaned, edges sharp

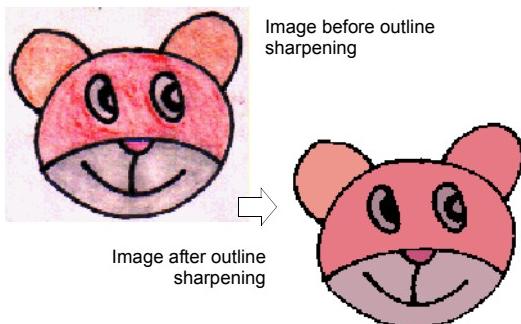
Outline sharpening

Outline sharpening means more clearly defining the outlines bordering distinct color blocks or

shapes in the image. These may have been indistinct in the original or made so by the scanning process. Outline sharpening is important for automatic digitizing because it makes it easier for the software to identify the distinct areas which become embroidery objects in the resulting design.



Note Outline sharpening only works on images with black or dark outlines.



Some images have solid outlines but they may be indistinct or incomplete. These need to be rectified with the Digitizer EX image preparation tools or a graphics package. See [Editing images in graphics applications](#) for details.

Noise filtering

Noise filtering means restoring the solid color blocks of the original image in scanned images. This is achieved by merging different shades into one solid color. Noise filtering is important for automatic digitizing because it makes it easier for the software to identify solid color blocks which become embroidery objects in the resulting design. It also cleans up blurred or mottled areas of color.

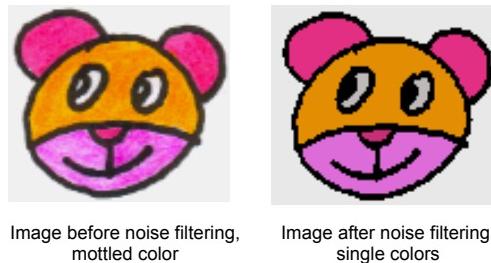


Image preparation tools

Use the image preparation tools to prepare images for automatic digitizing. Your choice of tool depends on the image. There are three tools:

Tool	Purpose	Capabilities
Edit Image	Link to a graphics package – e.g. Paint Shop Pro – for editing an image outside Digitizer EX.	Lets you crop, sharpen, re-color, add outlines, remove noise from an image.
Image Preparation	Prepare any non-outlined image.	Lets you reduce colors to a specified number. It automatically: <ul style="list-style-type: none"> • reduces each block to a single color • removes anti-aliasing, noise and dithering • removes colors smaller than specified area.
Outlined Image Preparation	Prepare outlined images.	Lets you adjust lightness or darkness of outlines. It automatically: <ul style="list-style-type: none"> • blends each outlined block into a single color • removes anti-aliasing, noise and dithering • sharpens outlines.



Note Even if your image looks ready to stitch when inserted into the software, it will need to be image-processed before conversion. The software will not let you apply automatic digitizing techniques without preliminary image-processing.

Using image preparation tools

It is important to use the correct preparation tools for your image. The example below shows an image with indistinct outlines. If the **Outlined Image Preparation** tool is used, outlines can be made darker and more distinct, improving stitching. By contrast, using the **Image**

Preparation tool before stitching produces a poorly stitched design.

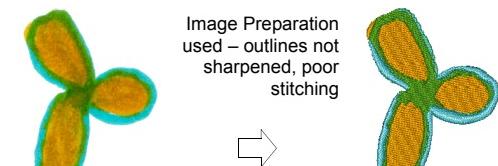


Image with indistinct outlines

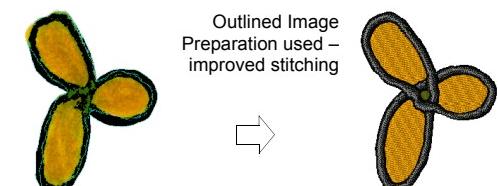


Image with solid outlines

Before using the **Outlined Image Preparation** tool, make sure that the image contains **solid** outlines. If there are gaps, separate color areas will be blended into one.

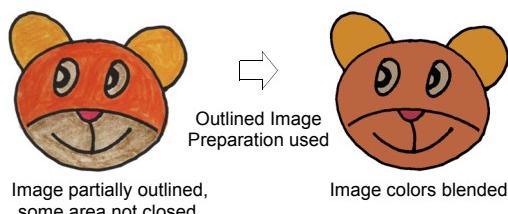


Image partially outlined,
some area not closed

Image colors blended

If you need to add outlines, close gaps, or reinforce an outline, you may need to draw it by hand before scanning the image. Or you may add it after scanning in a graphics package. See [Editing images in graphics applications](#) for details.



Try this! Try darkening the outlines using the outline appearance slider.

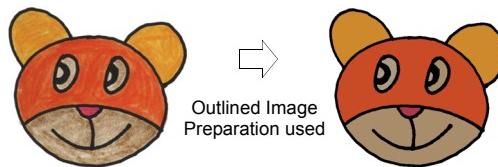


Image outline completed in
graphics package

Outlines sharpened

Image preparation summary

Action	Outlined image	Non-outlined image
Scan image	<ul style="list-style-type: none"> Scan in RGB mode Use sharpening 	<ul style="list-style-type: none"> Scan in RGB mode No sharpening
Scan line drawing	Scan in two color mode	
Touching up in graphics package	<ul style="list-style-type: none"> Crop Add or edit outlines Edit colors Remove noise 	<ul style="list-style-type: none"> Crop Edit image shapes Edit colors Remove noise
Use Outlined Image Preparation tool in Digitizer EX	Sharpen outlines and remove noise	
Use Image Preparation tool in Digitizer EX		Reduce colors and remove noise
Digitize	<ul style="list-style-type: none"> Manual Click-to-Stitch Click-to-Design 	<ul style="list-style-type: none"> Manual Click-to-Stitch Click-to-Design

Preparing non-outlined images



Use Image Preparation (Digitizer toolbar) to reduce the number of colors and remove image 'noise' in non-outlined images.

Use the **Image Preparation** tool to prepare **non-outlined** images for automatic digitizing. The tool automatically reduces color blocks in **bitmap** images to a single color, removing anti-aliasing and noise. You can let the software reduce the color count automatically or specify a precise number. The latter is useful if you want to match design colors to an exact number of thread colors.



Try this! Depending on the quality of the scanned image, you may need to touch it up manually before processing in Digitizer EX. You would normally do this in order to eliminate backgrounds, flood-fill solid areas with color, or add outlines, close gaps, crop areas or reinforce outlines. See [Editing images in graphics applications](#) for details.

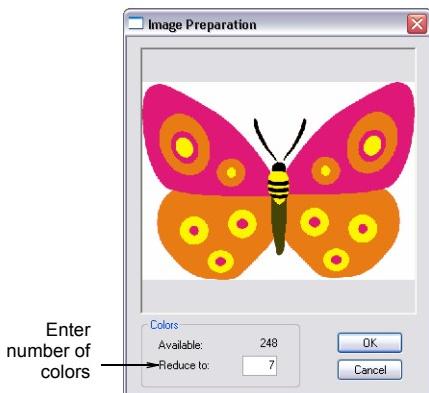
To prepare non-outlined images

- Scan or load an image. See [Scanning artwork into Digitizer EX](#) for details.



Image scanned in RGB color mode – converted to 256 colors upon loading

- Click the **Image Preparation** icon.
The **Image Preparation** dialog opens.



The image appears in the preview panel. The **Available** field shows the number of image colors.



Reduced to 3 colors



Reduced to 5 colors

- Check how many colors are in the image.
This is indicated by **Available**. If there appear to be too many, the image probably contains noise.
- Enter the number of colors you require.
The preview shows you how the design will look.
- Click **OK** to apply the changes.

Preparing outlined images



Use **Outlined Image Preparation** (Digitize toolbar) to sharpen outlines and reduce noise in outlined images.

Use the **Outlined Image Preparation** tool to prepare **outlined** images for automatic digitizing. The tool automatically sharpens outlines and reduces noise. Areas enclosed by a black outline are reduced to a single color. Outline sharpening makes it easier for the software to recognize distinct areas in the image. These areas then become the embroidery objects of the finished design. Use it particularly if the outlines are blurry, fuzzy or indistinct.



Try this! Depending on the quality of the scanned image, you may need to touch it up manually before processing in Digitizer EX. You would normally do this in order to eliminate backgrounds, flood-fill solid areas with color, or add borders, close gaps, crop areas or reinforce borders. See [Editing images in graphics applications](#) for details.

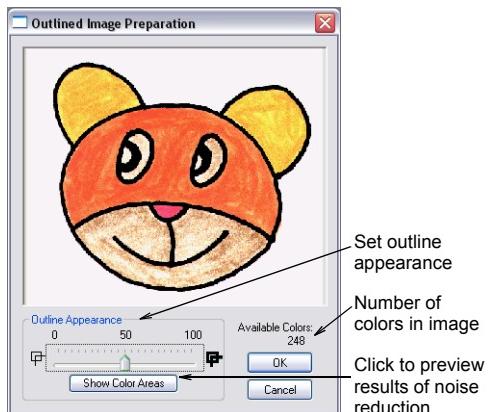
To prepare outlined images

- Scan or load an image. See [Scanning artwork into Digitizer EX](#) for details.



- Click the **Outlined Image Preparation** icon.
The **Outlined Image Preparation** dialog opens.

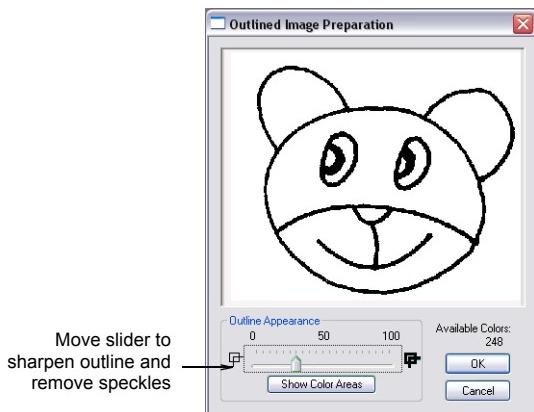
- Check how many colors are in the image.
This is indicated by **Available**. If there appear to be too many, the image probably contains noise.
- Enter the number of colors you require.
The preview shows you how the design will look.
- Click **OK** to apply the changes.



The image appears in the preview panel. The **Available Colors** field shows the number of image colors.

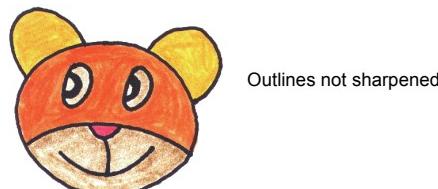
- 3 Set the outline contrast tolerance by dragging the slider control.

This produces a black and white preview of the detected outlines.

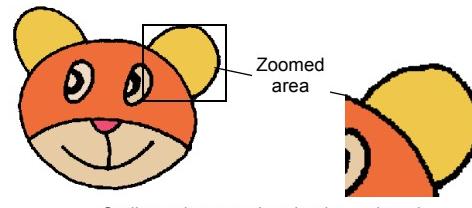


Try this! Move the slider to the right until there is too much black, then move it slowly back to the left. Stop when the image shows all the outlines you need.

- 4 Click **Show Color Areas** to see the updated image.



- 5 Click **OK** to apply the changes.



Chapter 14

AUTOMATIC DIGITIZING

The **Click-to-Stitch** tools are useful for quickly creating embroidery objects from images that do not require particular artistic effects or embroidery-specific knowledge. This in turn frees you to spend more time on the artistic or inherently complicated areas of your designs.

Click-to-Design automatically converts [artwork](#) to fully digitized embroidery with little or no intervention. Various forms of artwork can be used – both [bitmap](#) and [vector](#) – and various levels of user ‘assists’ applied to the process.

Use **Photo Click** to create embroidery from photographs or other images, color or grayscale.

Photo Click designs consist of rows of stitches of varying spacing. The effect resembles the output of a line printer.

This section describes how to automatically convert bitmap images to embroidery objects and complete designs, as well as how to create embroidery from grayscale images.



Digitizing images with Click-to-Stitch



Use Click-to-Parallel Weave Fill (Digitize toolbar) to digitize large artwork shapes with Parallel Weave Fill, preserving any holes within.



Use Click-to-Parallel Weave Fill without Holes (Digitize toolbar) to digitize large artwork shapes with Parallel Weave Fill, ignoring any holes within.



Use Click-to-Turning Angle Satin Fill (Digitize toolbar) to digitize narrow column artwork shapes with Satin stitch.



Use Click-to-Centerline (Digitize toolbar) to digitize centerlines in artwork with run line stitches.



Use Click-to-Outline (Digitize toolbar) to digitize boundaries of shapes with Run stitching using current properties.



Use Match to Palette (Digitize toolbar) to find the nearest match between a selected image color and thread color.

The **Click-to-Stitch** tools provide everything necessary to digitize shapes in **bitmap** images automatically without using manual input methods. These tools are useful for quickly creating embroidery objects from scanned images that do not require particular artistic effects or embroidery-specific knowledge. This in turn frees you to spend more time on the artistic or inherently complicated areas of your designs. Click-to-Stitch is available as a 'flyout toolbar' on the **Digitize** toolbar providing the six options shown above. These tools trigger functions of the same name found in the **Embroidery > Click-to-Stitch** menu.



Note Even if your **artwork** looks ready to stitch, it needs to be image-processed first. See [Preparing Images for Automatic Digitizing](#) for details.

Matching palette colors to an image



Use Match to Palette (Digitize toolbar) to find the nearest match between a selected image color and thread color. If not selected, the color is digitized in the current palette color.

Use the **Match to Palette** tool to find the nearest match between a selected image color block and a palette color. If **Match to Palette** is not selected,

the color block is digitized in the current palette color.

To match palette colors to an image

- 1 Scan or load an image. See [Scanning artwork into Digitizer EX](#) for details.



- 2 Select the image and process it. See [Preparing Images for Automatic Digitizing](#) for details.

- 3 Click the **Match to Palette** icon.

- 4 Select a **Click-to-Stitch** digitizing method.

- 5 Click the shape you want to digitize.

The object is digitized in the nearest palette color.



Matched to palette



Digitized in current color



Note If **Match to Palette** is not selected, the object is digitized in the current palette color.

Digitizing fills with Click-to-Stitch



Use Click-to-Parallel Weave Fill (Digitize toolbar) to digitize large artwork shapes with Parallel Weave Fill, preserving any holes within.



Use Click-to-Parallel Weave Fill without Holes (Digitize toolbar) to digitize large artwork shapes with Parallel Weave Fill, ignoring any holes within.



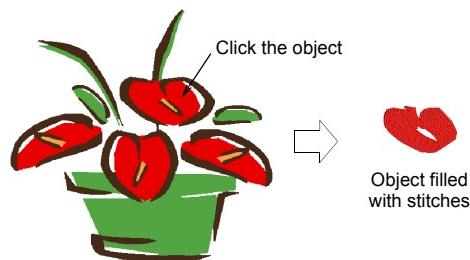
Use Click-to-Turning Angle Satin Fill (Digitize toolbar) to digitize narrow column artwork shapes with Satin stitch.

Click-to-Stitch can be used to create 'closed' Weave Fill objects, as well as objects with turning Satin Fills. Use **Click-to-Parallel Weave Fill** to digitize large areas in your artwork with **Weave Fill** stitching, preserving any holes within them. If you want holes ignored, use the **Click-to-Parallel Weave Fill without Holes** tool. Use **Click-to-Turning Angle Satin Fill** to digitize narrow column shapes with turning **Satin Fill** stitching. Current properties are applied. You can modify these as required before or after using the tools.

To digitize fills with Click-to-Stitch

- 1 Scan or load an image. See [Scanning artwork into Digitizer EX](#) for details.
- 2 Select the image and process it. See [Preparing Images for Automatic Digitizing](#) for details.
- 3 Select a thread color from the **Color chart**. Alternatively, use the **Match to Palette** tool to find the nearest matching thread color. See [Matching palette colors to an image](#) for details.
- 4 Select the required **Click-to-Stitch** fill input method.
- 5 Click the shape you want to digitize.
- 6 Press **Enter**.

The shape is immediately filled with stitches.



- 7 Digitize other filled shapes in the artwork in the same way changing thread color and input method as required.



- 8 Click **Vizualizer** to check the result.



Note Stitches are generated according to current stitch settings. These can be modified.

Digitizing outlines with Click-to-Stitch



Use Click-to-Centerline (Digitize toolbar) to digitize centerlines in artwork with run line stitches.

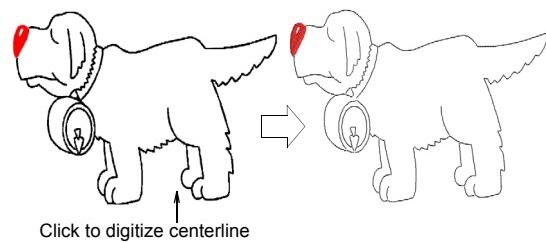


Use Click-to-Outline (Digitize toolbar) to digitize boundaries of shapes with Run stitching using current properties.

Use **Click-to-Stitch** to digitize boundaries and details with run stitching. Current properties are applied. You can modify these as required before or after using the tools.

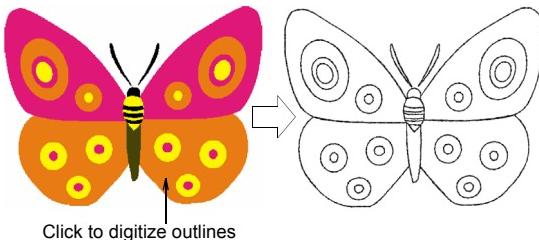
To digitize outlines with Click-to-Stitch

- 1 Scan or load an image. See [Scanning artwork into Digitizer EX](#) for details.
- 2 Select the image and process it. See [Preparing Images for Automatic Digitizing](#) for details.
- 3 Select a thread color from the **Color chart**. Alternatively, use the **Match to Palette** tool to find the nearest matching thread color. See [Matching palette colors to an image](#) for details.
- 4 Select the required **Click-to-Stitch** outline input method:
 - Use **Click-to-Centerline** to digitize centerlines in your [artwork](#) with run stitching.



Click to digitize centerline

- Use **Click-to-Outline** to digitize boundaries of shapes with run stitching.



Note Stitches are generated according to current stitch settings. These can be modified.

Digitizing images automatically with Click-to-Design

An extension of Click-to-Stitch technology, Click-to-Design recognizes shapes in **artwork** and makes decisions about the most suitable stitch types to use. It also determines the stitching sequence based on closest join. Artwork is effectively ‘batch processed’ to create the many embroidery objects that make up a design. Click-to-Design has been improved with a ‘flyout toolbar’ which provides two options: **Click-to-Design Instantly** (the default) and **Click-to-Design Advanced**. These tools trigger functions of the same name found in the **Embroidery > Click-to-Design** menu.



Note Only one image may be selected at a time. The command is disabled if the selection contains anything other than an image.

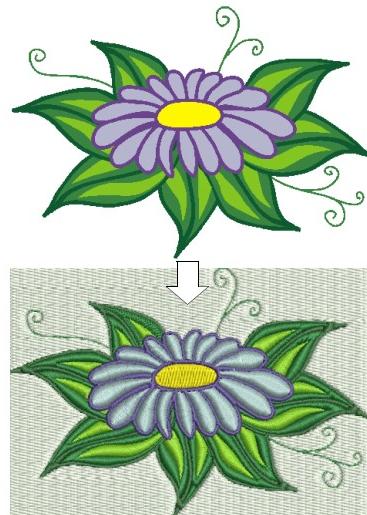
Creating embroidery designs with Click-to-Design Instantly

 Use Click-to-Design Instantly (Digitize toolbar) to create embroidery designs directly from imported images using default settings.

In essence, creating an embroidery design with the **Click-to-Design Instantly** tool is simply a matter of selecting the image you want to convert, and clicking the tool. The system automatically determines the color to omit, fill colors, detail color and most suitable stitch types to apply to an image using the default settings. It immediately generates stitches for the selected image.

To create embroidery designs with Click-to-Design Instantly

- 1 Scan or load an image. See [Scanning artwork into Digitizer EX](#) for details.



- 2 Select the image and click the **Click-to-Design Instantly** icon.

Even if an image is not pre-processed with the **Image Preparation** tool, **Click-to-Design Instantly** automatically processes the selected image and converts it to embroidery.

Creating embroidery designs with Click-to-Design Advanced



Use Click-to-Design Advanced (Digitize toolbar) for greater control when creating embroidery designs directly from imported images.

If you want greater control over an image, the **Click-to-Design Advanced** tool allows you to control the colors and stitch types used during conversion. Even if your **artwork** looks ready to stitch when inserted into the software, it will need to be image-processed before conversion. The software will not let you apply automatic digitizing techniques without preliminary image-processing. See [Image preparation techniques](#) for details.

To create embroidery designs with Click-to-Design Advanced

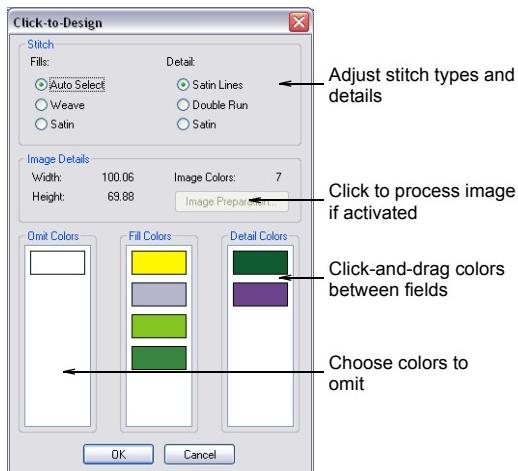
- 1 Scan or load an image. See [Scanning artwork into Digitizer EX](#) for details.



2 Select the image and process it. See [Preparing Images for Automatic Digitizing](#) for details.

3 Select the image and click the **Click-to-Design Advanced** icon.

The **Click-to-Design** dialog opens. Provided the image has been correctly image-processed, all available colors appear by default in the **Fill Colors** column. Image information is given, including width and height values as well as the number of image colors.



Note If the image has not been correctly image-processed, no colors appear and the **Image Preparation** button is activated. Click to process the image. See [Image preparation techniques](#) for details.

- 4 Click-and-drag any colors you want to omit from automatic stitch processing into the **Omit** column.
- 5 Similarly, click-and-drag or leave any colors you want to be treated as filled areas in the **Fill** column.



Background color omitted



Green colors omitted

6 Click-and-drag any colors you want to be treated as 'details' – i.e. any outlines, borders or small areas you want to stitch out last – into the **Details** column.

7 Select a stitching style for fills from the list.

- ◆ **Auto Select:** the software decides on a suitable stitch type.
- ◆ **Weave:** suited for most areas.
- ◆ **Satin:** suited for use in smaller areas.



Note Do not use Satin fill for areas where the stitch length exceeds 7 mm.



Fills: Satin
Details: Satin



Fills: Weave
Details: Satin

- 8 Select a stitching style for details from the list.
 - ◆ **Satin:** most suited for use with thicker lines or small shapes of varying width.
 - ◆ **Double Run:** most suited for use with thin lines.
 - ◆ **Satin Line:** suited for use with thicker lines.

9 Click OK.

Click-to-Design converts the artwork to embroidery objects and generates stitches.



Try this! Software matches colors from the existing palette. If the design does not seem to convert colors properly, check that your monitor is set for 16 Bit Colors.

Creating embroidery from photographs

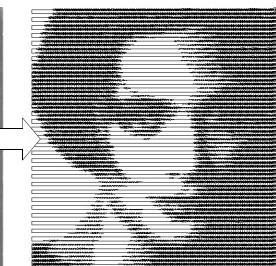
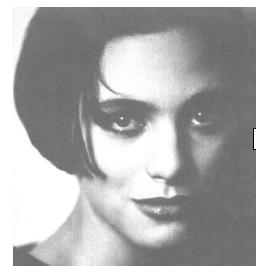


Use Photo Click Instantly (Digitize toolbar) to create embroidery designs directly from photographs or other images using default settings.



Use Photo Click Advanced (Digitize toolbar) for greater control when creating embroidery designs directly from photographs or other images.

Use **Photo Click** to create embroidery from photographs or other images, color or grayscale. Grayscale images are made up of different shades of gray pixels. Color images are automatically converted to grayscale when you apply Photo Click. Photo Click designs consist of rows of stitches of varying spacing (PhotoSatin Fill). The effect resembles the output of a line printer. Adjust the angle of the rows and/or the stitches themselves.



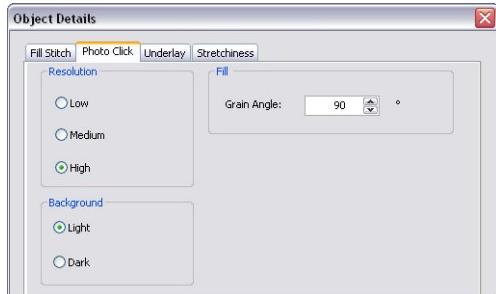
Try this! For best results, use images with well-defined subjects or constantly varying shades.

To create embroidery from photographs

- 1 Scan or load an image. See [Scanning artwork into Digitizer EX](#) for details.
- 2 Select a thread color.

- 3 With the image selected, click the currently active Photo Click icon.

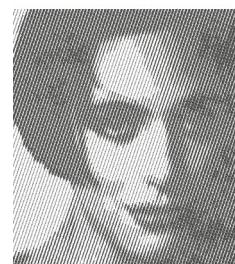
- ♦ If **Photo Click Instantly** is active, the photo will be processed using the current settings and selected thread color.
- ♦ If **Photo Click Advanced** is active, the **Object Details > Photo Click** dialog opens.



- 4 In the **Resolution** panel, select a resolution option – Coarse, Medium, or Fine.



Fine resolution



Coarse resolution



Note The coarser the resolution the more spacing between rows.

- 5 In the **Row** panel, enter a new angle as required.



Row Angle: 0°



Row Angle: 90°

- 6 In the **Background** panel, select a background option:

- ♦ **Light**: applies the maximum row width value to the lightest part of the image.

- **Dark:** applies the maximum row width to the darkest part of the image.



Light background



Dark background



Try this! The option you select usually depends on whether the fabric is light or dark. The **Dark** option produces a negative of the image.

- 7 In the **Fill** panel, adjust the **Grain Angle** as required. This determines the angle of the stitches.



Grain Angle: 0°



Grain Angle: 45°

- 8 Click **OK**.

EasyDesign generates stitches for the selected image. This process may take some time.



Try this! Use Vizualizer for a more accurate representation of the stitching.

Part IV

MODIFYING DESIGNS

After digitizing a design, you can modify it as a whole, edit individual objects or even individual stitches.

Combining and resequencing objects

This section describes how to combine objects and designs by copying and pasting, duplicating, and inserting techniques. It also describes how to resequence objects by cut and paste, by color or object. See [Combining and Resequencing Objects](#) for details.

Arranging and transforming objects

This section describes how to position objects, lock and group, as well as how to scale, rotate, skew, and flip objects. See [Arranging and Transforming Objects](#) for details.

Reshaping and editing objects

This section describes how to reshape objects with control points, adjust stitch angles, and change entry and exit points. See [Reshaping and Editing Objects](#) for details.

Chapter 15

COMBINING AND RESEQUENCING OBJECTS

Digitizer EX lets you add to designs quickly by duplicating and copying existing objects. It also lets you combine designs by inserting the contents of one file into another.

Stitching sequence usually occurs in the order in which the design was digitized. However, you can change this by a variety of methods.

This section describes how to combine objects and designs by copying and pasting, duplicating, and inserting techniques. It also describes how to resequence objects by cut and paste, by color or object.



Combining objects and designs

A design or design objects can be copied or cut and placed on the Windows clipboard for temporary storage. It can then be pasted any number of times, within either the same or another design, until replaced on the clipboard. You can also cut, copy and paste lettering objects within and between designs. When you insert one design in another, the two Color Charts are merged.

Inserting designs

Use Insert Design (Embroidery menu) to combine two or more designs.

Digitizer EX lets you insert one design into another. The two (or more) designs can then be saved as a combined design.

To insert designs

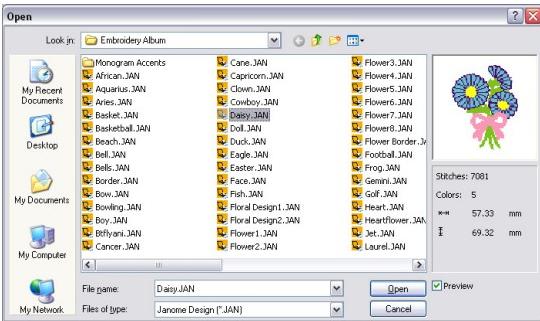
- 1 Open the first design.

- 2 Travel to the point in the stitching sequence where you want to insert the second design. See [Traveling through the stitching sequence in EasyDesign](#) for details.

You can insert a design between objects in the sequence, or 'nest' the design within an object.

- 3 Select **Embroidery > Insert Design**.

The **Open** dialog opens.



- 4 From the **Look In** dropdown list, select the folder where the design you want to insert is stored, and select the required format from the **Files of type** dropdown list.
- 5 Select the design file to insert, and click **Open**.
The design is inserted at the current needle position.
- 6 Move the second design into the required position.
See [Positioning objects using click and drag](#) for details.



Try this! To ensure that all the objects in the inserted design stay together, group the design while working with it. See [Grouping objects](#) for details.

- 7 Save the combined design under the original or different name.
The designs you have inserted are now combined into one design.

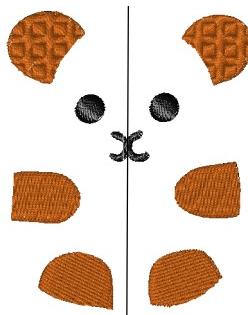
Copying and pasting objects

Click **Copy** (Standard toolbar) to copy selected objects to the clipboard.



Click **Paste** (Standard toolbar) to paste copied objects in the design.

You can copy objects to create multiple, identical objects, or to insert objects from other designs.



Objects copied and pasted



Note You can also remove objects from a design using the **Cut** command and paste them back in again. **Cut** and **Paste** changes the stitching sequence in the design. See [Resequencing objects with cut and paste](#) for details.

To copy and paste objects

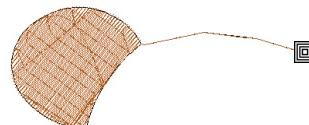
- 1 Select the object/s to copy.



- 2 Click the **Copy** icon.

The selected object is copied to the clipboard.

- 3 Travel to the position in the stitching sequence at which you want to paste the object. See [Traveling through the stitching sequence in EasyEdit](#) for details.

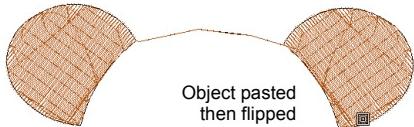


Travel to the position

You can paste between other objects in the sequence, or 'nest' the copied object within an object. See [Nesting objects](#) for details.

- 4 Click the **Paste** icon.

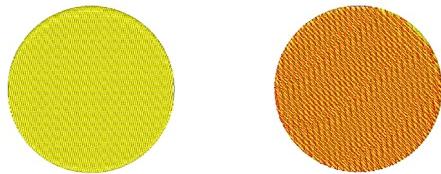
The object is pasted in the design. The object remains on the clipboard and can be pasted repeatedly until the next **Copy** or **Cut** command.



Duplicating objects

Select **Duplicate** (Edit menu) to duplicate selected objects.

Objects can be duplicated rather than copied. When an object is duplicated, it is not copied to the clipboard. This leaves the clipboard free for you to cut or copy other objects.



Duplicated object spacing increased and color changed to create blending effect

To duplicate objects

- Travel to the position in the stitching sequence at which you want to place the object. See [Traveling through the stitching sequence in EasyDesign](#) for details.

You can place the duplicate between other objects in the sequence, or 'nest' it within an object. See [Nesting objects](#) for details.

- Select the object/s to duplicate.
- Select **Edit > Duplicate**.

The duplicate object is placed directly on top of the original, in the specified position in the stitching sequence.



Warning Make sure that there is only one copy of an object at any one position. If an object is pasted twice into the same position, it will be stitched twice.

Cloning objects



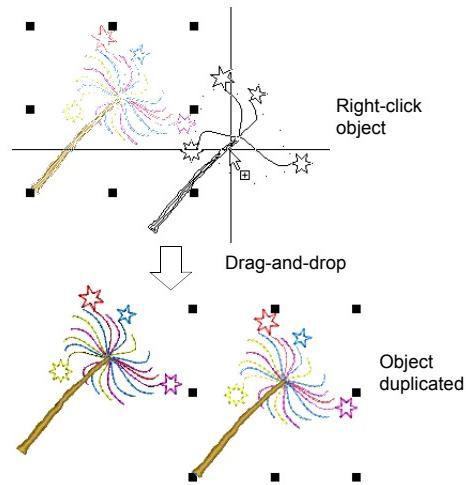
Click **Select** (Edit toolbar) and click an object to select it.

The **Quick Clone** feature lets you quickly duplicate selected objects by right-clicking, dragging and releasing at a new position.

To clone objects

- Select an object or objects.
- Holding down the right mouse button, drag the object(s) to a new position.

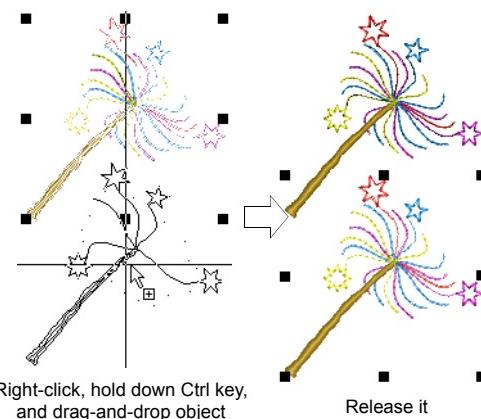
A black outline of the object appears. The cursor icon includes a plus symbol.



Try this! For more precise positioning, hold down the **Ctrl** key while dragging – movement is thereby constrained to X or Y axes.

- Release the mouse.

A duplicate object(s) is created at the release point.



Right-click, hold down Ctrl key, and drag-and-drop object

Release it



Try this! Clone objects to another window by the same method. To temporarily deactivate automatic scrolling, hold down the **Shift** key while dragging. An

identical copy of the selection is created at the same coordinates as the first window, no matter where the mouse is released.

Deleting objects

Select Delete (Edit menu) to delete selected objects.

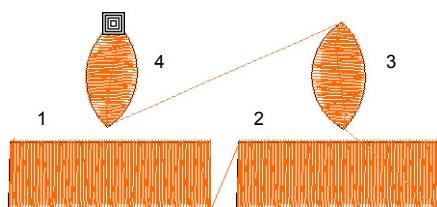
Various methods are available for deleting objects.

To delete objects

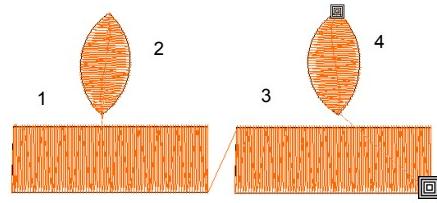
- Select the object/s to delete, and do one of the following:
 - Press **Delete**.
 - Select **Edit > Delete**.

Nesting objects

You can inset or 'nest' an object in the middle of another object's stitching sequence to prevent long connectors being generated. Nesting lets you create or insert an object at an exact point of the stitching sequence. This feature is particularly useful with stamps, and other designs where long connectors may be generated.



Objects not nested – long connectors



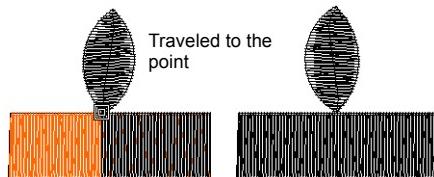
Objects nested – short connectors and better stitching order



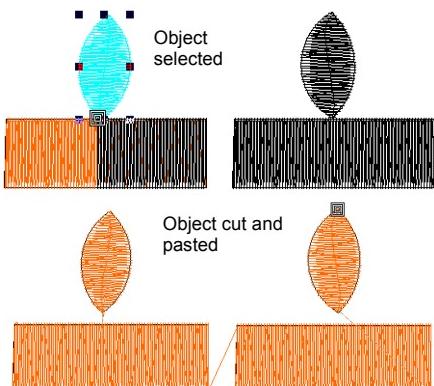
Note The stitching sequence of nested objects is maintained when stitches are regenerated for either object. However, if you resequence a design containing nested objects it will stitch objects in the original object sequence.

To nest objects

- Travel through the first object until the needle position marker is in the place you want to insert the second object. See [Traveling through the stitching sequence in EasyEdit](#) for details.



- Insert the second object. To do this, either digitize the object or cut and paste it into position.



The second object is 'nested' in the stitching sequence of the first object. All required functions are automatically inserted for the second object.



Try this! To view the connectors that are generated for the nested object, view in normal view.

Resequencing embroidery objects

The embroidery objects in a design form a stitching sequence. Initially, objects are stitched in the order in which they were created. You can change the position of a selected object by cutting it, then pasting it somewhere else in the sequence, or by using the **Resequence** command.

Resequencing objects with cut and paste



Click Cut (Standard toolbar) to cut selected objects and place them on the clipboard.



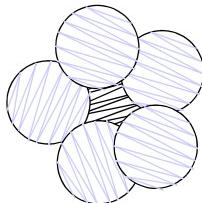
Click Paste (Standard toolbar) to paste copied objects in the design.

You can resequence objects by cutting an object from the design and pasting it back at a different point in the sequence. This does not change the physical location of the object.

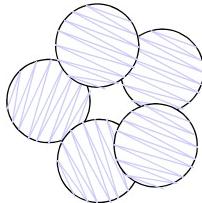
To resequence objects with cut and paste

- Select the object/s to resequence.
- Click the **Cut** icon.

The selected object is removed from the design and moved to the clipboard.



Completed design with center stitched first



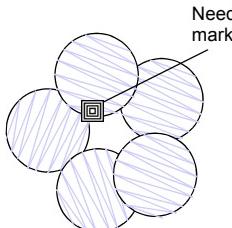
Select and cut object to be changed

- Travel to the position in the stitching sequence where you want to paste the object. See [Traveling through the stitching sequence in EasyDesign](#) for details.

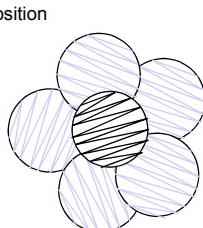
You can paste between other objects in the sequence, or 'nest' the cut object within another object. See [Nesting objects](#) for details.

If you do not move the current needle position marker, the object is pasted at the end of the sequence.

- Click the **Paste** icon.



Travel to end of design



Paste object

The object is pasted back in the design.



Note The object remains on the clipboard and can be pasted repeatedly until the next **Copy** or **Cut** command.

Resequencing selected objects

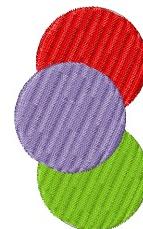
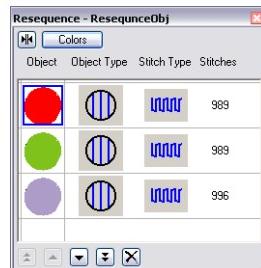


Use Resequence (Edit toolbar) to resequence selected objects.

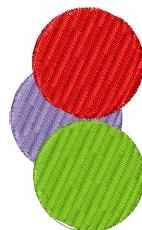
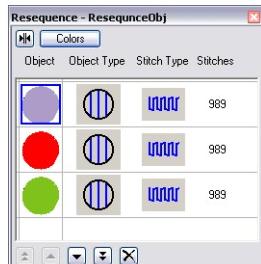
You can resequence objects by selecting them in the required stitching order. The **Resequence** dialog is 'modeless' meaning that it stays on the design window as long as you need it. See also [Selecting and viewing objects with the Resequence dialog](#).

To resequence selected objects

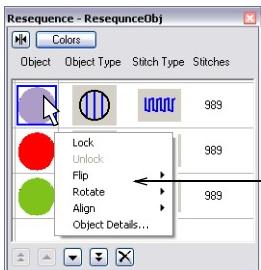
- Click the **Resequence** icon.
- The **Resequence** dialog opens.
- Select the **Objects** button as required.



- Select the first object you want to resequence.
 - Holding down **Ctrl**, select multiple objects to resequence.
 - Holding down **Shift**, select a range of objects to resequence.
- Click the buttons to reposition the selected object/s in the stitching sequence:
 - Top: moves it to the start of the sequence.
 - Up: moves it up one place up in the sequence.
 - Down: moves it one place down in the sequence.
 - Bottom: moves it to the end of the sequence.
 - Delete: removes it from the sequence.
- Click **OK**.



Try this! You can also access commands via the **Resequence** dialog, including lock/unlock and object details.



Right-click to access popup menu

Resequencing objects by color



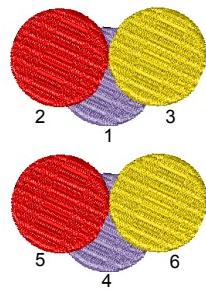
Click Resequence (Edit toolbar) to resequence objects by color.

You can resequence objects by color. This reduces the number of color changes in a design. The **Resequence** dialog is 'modeless' meaning that it stays on the design window as long as you need it.

To resequence objects by color

- 1 Click the **Resequence** icon. The **Resequence** dialog opens.
- 2 Select the **Colors** button as required.

Resequence - Resequence1		
Color	Thread ID	Objects
209	1	
225	1	
275	1	
209	1	
225	1	
275	1	



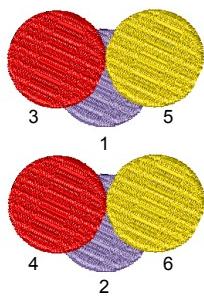
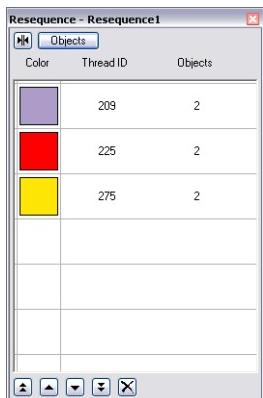
Stitching sequence labelled, color changes after each object

- 3 Select the first color you want to resequence.
 - ◆ Holding down **Ctrl**, select multiple objects to resequence.
 - ◆ Holding down **Shift**, select a range of objects to resequence.
- 4 Click the buttons to reposition the selected color/s in the stitching sequence:
 - ◆ Top: moves it to the start of the sequence.
 - ◆ Up: moves it up one place up in the sequence.
 - ◆ Down: moves it one place down in the sequence.
 - ◆ Bottom: moves it to the end of the sequence.
 - ◆ Delete: removes it from the sequence.

Resequence - Resequence1		
Color	Thread ID	Objects
209	1	
225	1	
209	1	
275	1	
225	1	
275	1	

Reposition selected color

- 5 Click **OK**.



Stitching sequence
changed, color changes
reduced

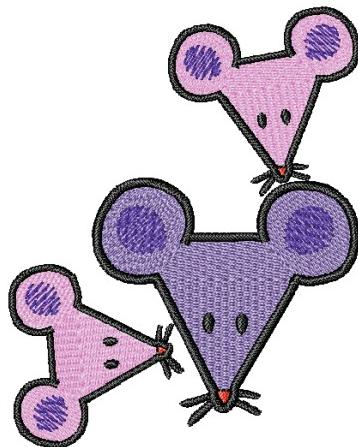
Chapter 16

ARRANGING AND TRANSFORMING OBJECTS

You can change the position, size and orientation of objects in a design by moving, scaling and transforming them. Group objects together to apply a change to them all at once, or lock them to avoid unintentional modification. You can modify objects directly on-screen or by changing their settings. You can also access some of these functions using the popup menu.

The scalability and stitching quality of a design ultimately depend on its original source. Only native JAN designs contain the complete set of design information required for 100% perfect scaling and transformation. See also [Embroidery design formats](#).

This section describes how to position objects, lock and group, as well as how to scale, rotate, skew, and flip objects.



Positioning and aligning objects

Position objects in your design using the mouse to drag them to a new position, nudging them with the arrow keys or by specifying the X:Y coordinates in the **Object Details** dialog.

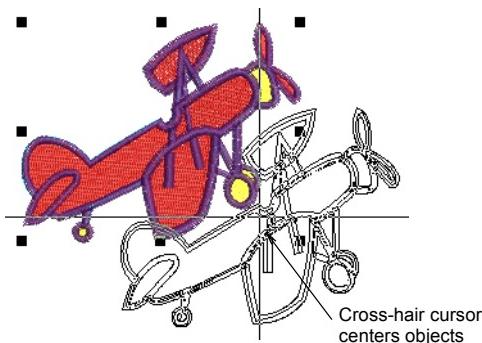
Positioning objects using click and drag

The simplest way to move an object in your design is to click and drag it to a new position. Alternatively, use the arrow keys to 'nudge' objects into position.

To position objects using click and drag

- 1 Select the object/s to move.

- 2 Click and drag the object to a new position.



- 3 For more accurate positioning, press the arrow keys to 'nudge' the object into the required position.



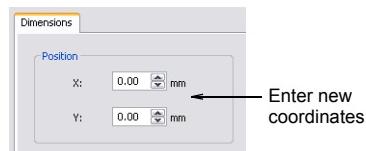
Try this! Zoom in to make small adjustments. The distance the object moves depends on the current zoom factor. The greater the zoom factor, the smaller the distance moved.

Positioning objects using object details

You can position selected objects relative to the center of a design by entering its X:Y coordinates in the **Object Details** dialog.

To position objects using object details

- Select the object/s to move.
- Double-click the object to open the **Object Details** dialog, and select the **Dimensions** tab.



- Enter the new object coordinates in the **Position** fields.
- Click **OK**.

The object is centered over the coordinates you set.

Aligning objects



Use Align Left (Edit toolbar) to left-align selected objects.



Use Align Centers Vertically (Edit toolbar) to align selected objects through their vertical centers.



Use Align Right (Edit toolbar) to right-align selected objects.



Use Align Top (Edit toolbar) to top-align selected objects.



Use Align Centers Horizontally (Edit toolbar) to align selected objects through their horizontal centers.



Use Align Bottom (Edit toolbar) to bottom-align selected objects.



Use Align Centers (Edit toolbar) to align selected objects to their centers.

Quickly align selected objects in a design to the left, right, top, bottom or center of a specific object. The new **Align** tools in **Edit** toolbar offer a set of buttons to trigger functions of the same name found in the **Align** popup menu. The tools all become enabled when two or more objects are selected.

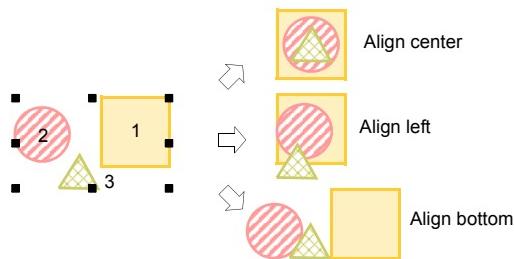
To align objects

- Select the objects you want to align.

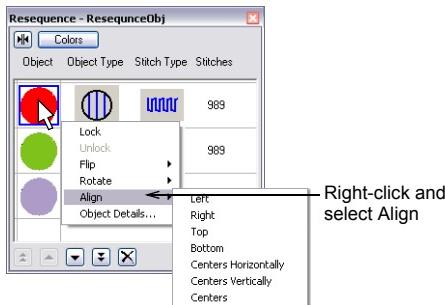


Note Objects are aligned with the **last** object selected.

- Select the object you want to align with.
- Click an alignment tool or select **Align** in the popup menu by right-clicking the objects.



Try this! You can also access the commands via the **Resequence** dialog. See also [Resequencing selected objects](#).



Locking and grouping objects

When you lock objects, you can prevent them from being moved or modified by accident. When you group objects, you can apply a change to all objects at once, saving time, and ensuring that the change is consistent across all.

Locking objects

Select Lock (Edit menu) to lock selected objects.

Select Unlock (Edit menu) to unlock objects.

Lock objects to prevent them from being moved or modified by accident. For example, locking backdrop images or vector drawings holds them in place as you digitize, transform or reshape the embroidery objects near them. Locked objects can be unlocked for modification at any time.

To lock objects

- Select the object you want to lock and select **Edit > Lock**.

The selection handles disappear, indicating that the object can no longer be selected or modified.

- To unlock objects, select **Edit > Unlock**.

All locked objects in the design are unlocked.



Try this! Right-click the selected objects and select lock from the popup menu.

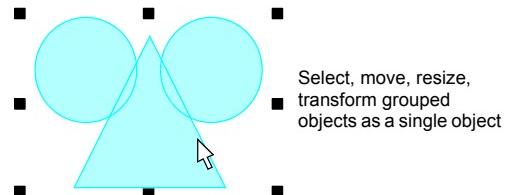
Grouping objects

Click **Group** (Edit menu) to group selected objects.

You can group selected objects or the whole design to keep them together for moving, scaling and transforming actions.

To group objects

- Select the objects to group.
- Select **Edit > Group**.



Selected objects are combined into a group. This can be selected, moved, resized and transformed as a single object.



Try this! To select with a bounding outline, simply drag the outline over one component object and the whole group will be selected. See also [Selecting objects with a bounding box](#).

Ungrouping objects

Click **Ungroup** (Edit menu) to ungroup selected objects.

When you have finished making changes to a group, you can ungroup it and work with the objects individually.

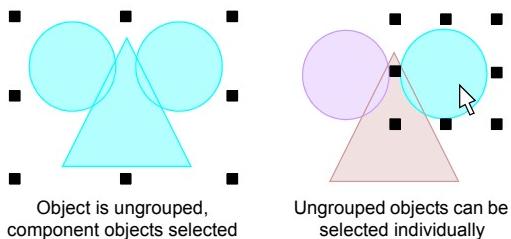


Note You need to ungroup before you can set embroidery properties for any individual object in the group.

To ungroup objects

- Select the grouped object.
- Select **Edit > Ungroup**.

The object is ungrouped, and the component objects selected.



Scaling objects

You can scale objects by dragging the selection handles with the mouse, specifying the exact dimensions in the **Object Details** dialog, or by setting the distance between reference points on the design. As an object is scaled, the stitch count changes to preserve the current stitch spacing.



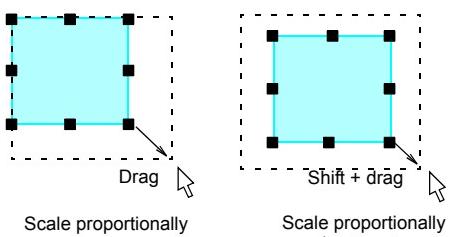
Note Only native JAN designs contain the complete set of design information required for 100% perfect scaling and transformation.

Scaling objects using click and drag

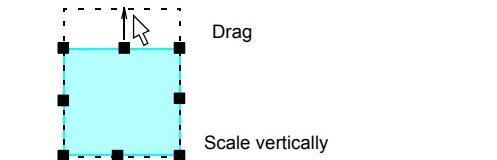
You can change the height and width of an object, or scale it proportionally using the selection handles. Scale objects individually, or select multiple objects and scale them together.

To scale objects using click and drag

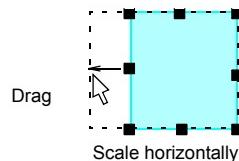
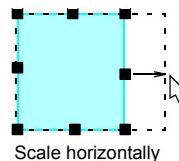
- 1 Select the object/s to scale.
Eight selection handles appear around the object.
- 2 Click and drag a selection handle to resize the object.



- ♦ To scale height and width proportionally, use a corner handle.



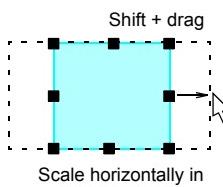
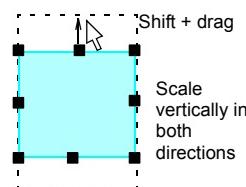
- ♦ To change the height, use the handles at the center-top or center-bottom.



- ♦ To change the width, use the handles at the center-sides.



Try this! To resize around a center anchor, hold down Shift while you resize.



Scaling objects using Object Details

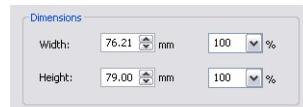
You can scale selected objects or a whole design using **Object Details**. This allows stitches to be regenerated and the original stitch density preserved.



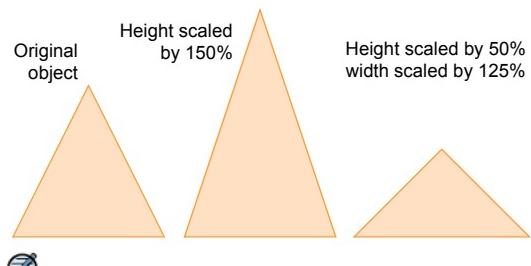
Warning If you scale a stitch design by more than 5%, changes to stitch density will affect the design quality. See also [Embroidery design formats](#).

To scale objects using object details

- 1 Select the object/s to scale.
- 2 Double-click the object to open the **Object Details** dialog, and select the **Dimensions** tab.

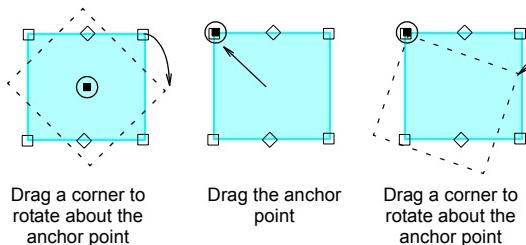


- 3 In the Dimensions panel, scale the object as required. Either:
 - Enter exact height and width values
 - Enter the new height and width as a percentage of the current dimensions.
- 4 Click OK.



Note After scaling, the new object size is reset to 100%.

- 4 Click a rotation handle, and drag it clockwise or anti-clockwise. An outline and cross-hairs display as you rotate.



Rotating objects

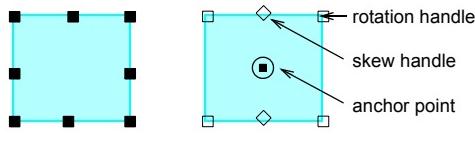
You can rotate objects directly on-screen or by using the Rotate tool.

Rotating objects using click and drag

When you select an object, selection handles display at its extremities. If you click the object again, the handles change to rotation handles.

To rotate objects using click and drag

- 1 Select the object/s to rotate.
 - 2 Click the object a second time.
- Rotation handles appear at the corners of the object and an anchor point displays at the object's center.



Note If you click too quickly, the **Object Details** dialog opens.

- 3 If required, drag the rotation anchor from the center to a new position.

Rotating objects using Rotate CCW/CW

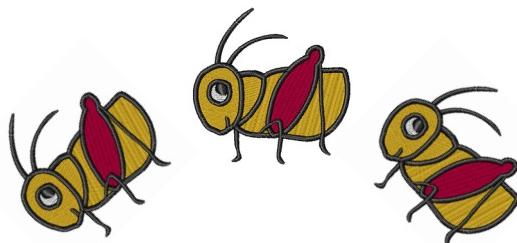


Click Rotate 45° CCW/CW (Edit toolbar) to rotate a selected object or design by 45° clockwise. Right-click to rotate by 45° counter-clockwise.

Use the **Rotate 45° CCW/CW** tool to rotate objects by 45° rotations in either direction.

To rotate objects using Rotate CCW/CW

- 1 Select object/s with the **Select** tool.



- 2 Click **Rotate 45° CCW/CW** on the toolbar.
 - Click to rotate 45° counter-clockwise.
 - Right-click to rotate 45° clockwise.

Skewing objects using click and drag

You can skew objects along the horizontal plane by clicking skew handles and dragging to the required angle.

To skew objects using click and drag

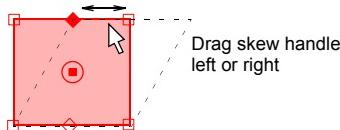
- 1 Select the object/s to skew.

2 Click the object a second time.

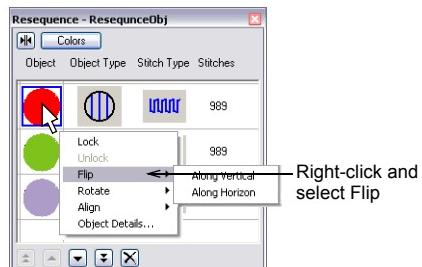
Rotation and skew handles appear around the object. Skew handles are diamond-shaped and appear at the center-top and bottom of the object.

3 Drag the skew handles left or right.

The object skews along the horizontal plane. An outline and cross-hairs show the change to the object's shape.



Try this! You can also access the commands via the **Resequence** dialog. See also [Resequencing selected objects](#).



Flipping objects



Click **Flip Vertically** (Edit toolbar) to flip a selected object or design up/down.

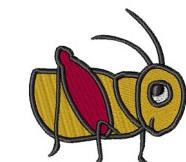
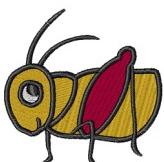


Click **Flip Horizontally** (Edit toolbar) to flip a selected object or design left/right.

You can flip selected objects horizontally or vertically using the dedicated tools.

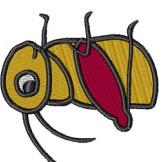
To flip objects

- Select the object/s to flip.
 - Click the **Flip Horizontally** tool to flip the object left/right.
 - Click **Flip Vertically** to flip up/down.
- Alternatively, right-click the object and select **Flip Horizontally** or **Flip Vertically** from the popup menu.



Source object

Flip horizontally



Flip vertically



Flip in both directions

Chapter 17

RESHAPING AND EDITING OBJECTS

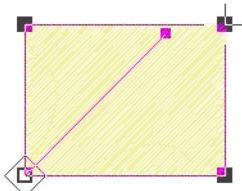
Digitizer EX lets you modify object shapes by means of control points. These vary slightly with the object type. For some objects, you can also change control points from corner points to curves. Stitch angle lines and entry and exit markers all appear around selected objects. Stitch angle adjustments depend on the type of object you are working with. With some objects you can set a stitch angle for the entire object. With others, you can adjust the turning stitch angles. You can also change the stitch entry and exit points of individual objects. This is useful in order to reduce the number of travel runs connecting adjoining objects.

This section describes how to reshape objects with control points, adjust stitch angles, and change entry and exit points.

Reshaping objects

You can change the shape of an object by selecting it with the **Reshape** tool and moving, adding or deleting control points on the outline. For some objects, you can also change control points from corner points to curves. The types of control points you will encounter in **Reshape** mode are shown below.

-  Entry point
-  Exit point
-  Corner point
-  Curve point
-  Stitch angle line





Try this! The **Reshape** tool lets you modify shapes without affecting the stitch angles.

Reshaping objects using control points



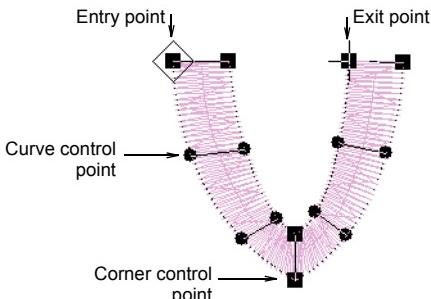
Click Reshape (Edit toolbar) to display the control points of selected objects.

Change object shapes by selecting them with the **Reshape** tool and modifying the available control points.

To reshape objects using control points

- 1 Select the object to reshape.
- 2 Select the **Reshape** icon.

Control points appear around the object.



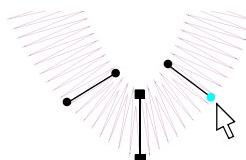
- 3 Modify the outline by adding, deleting, changing or moving the control points, depending on the object type and the required change.
- 4 Change entry and exit points, and stitch angle as required.
- 5 Press **Esc** to finish.

Selecting control points

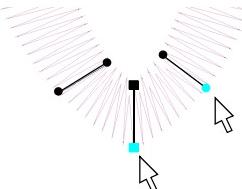
Control points can be selected individually or together, for repositioning or modification.

To select control points

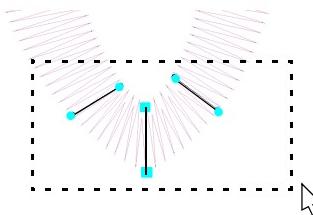
- Click to select a single control point.



- Holding down **Ctrl**, click to select multiple control points.



- Click and drag a bounding box around a group of control points to select.

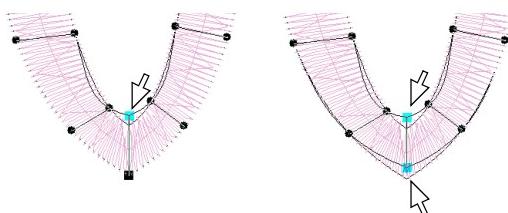


Moving control points

You can move control points to change an outline shape.

To move control points

- Click and drag a single control point to a new position.
- Similarly, click and drag multiple control points to a new position.



Adding control points



Use Reshape (Edit toolbar) to reshape selected objects.

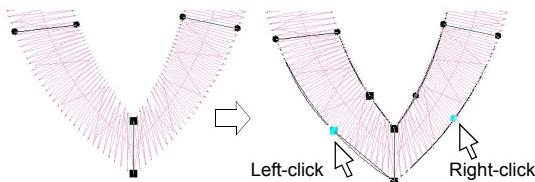
You can add control points to object outlines by clicking with the **Reshape** tool selected.



Note You cannot add control points to objects created with the **Parallel Fill Circle** tool. See also [Reshaping circle objects](#).

To add control points

- 1 Position the pointer where you want to add the control point.
- 2 Click to add a control point.
 - Left-click to add a corner point.
 - Right-click to add a curve point.



- 3 Adjust the position of the control point by dragging it along the outline as required.

Changing control points

Reshape object outlines by changing corner control points to curves, or vice versa.



Note You cannot change the end points of Turning Angle Fill columns, or any control point in objects created with the **Parallel Fill Circle** tool. See also [Reshaping circle objects](#).

To change control points

- 1 Select the control point.
 - 2 Press **Spacebar**.
- Corner control point changes to curve, and vice versa.

Deleting control points

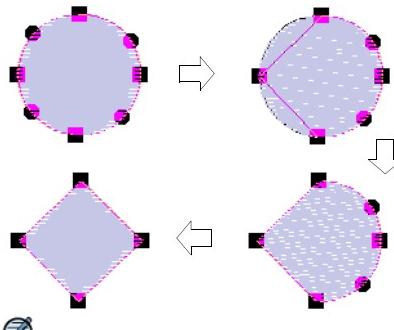
Delete unwanted control points to change an outline or to remove unwanted boundaries from **Parallel Fill** objects.



Note You cannot delete the control points from objects created with the **Parallel Fill Circle** tool. See also [Reshaping circle objects](#).

To delete control points

- 1 Select the control point or points.
- 2 Press **Delete**.



Note If the object only has two control points (or two pairs of control points as in the case of **Turning Angle Fill** objects), deleting one deletes the whole object.

Reshaping circle objects

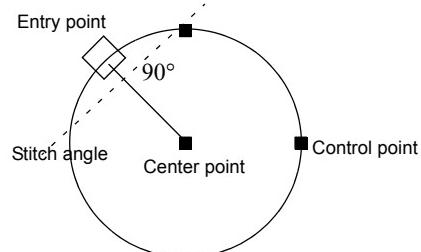


Use Reshape (Edit toolbar) to reshape circle objects.

You can change Circle objects from circles to ovals using the **Reshape** tool. Circle objects have two reshape control points (used to change the radius and orientation of the object), a center point (used to reposition it), and a stitch entry point. You cannot add, change or delete control points in these objects.

To reshape circle objects

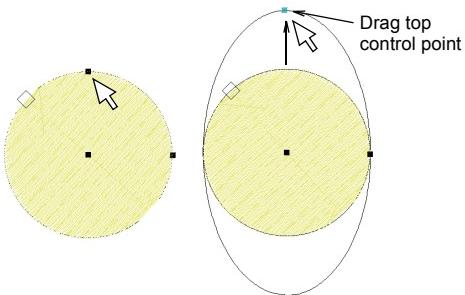
- 1 Select a **Parallel Fill Circle** object.
- 2 Click the **Reshape** icon.



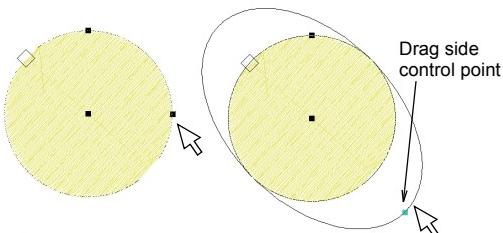
Try this! To move a circle, click the control point in the circle's center, and drag it to a new position.

- 3 Click a control point on the circle outline.

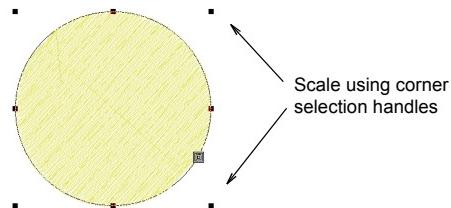
- To reshape without changing the orientation, use the top control point.



- To reshape and spin the object around its center point, use the side control point.



Try this! To scale a circle without changing it to an oval, select it with the **Select** tool, and use the corner selection handles to scale it.



Adjusting stitch angles

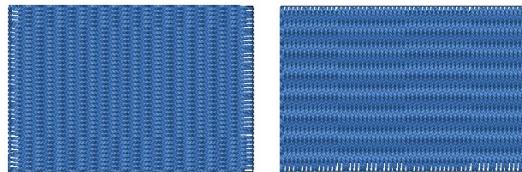
Stitch angle adjustments depend on the type of object you are working with. With **Parallel Fill** objects you can set a stitch angle for the entire object. You can do the same with **Turning Angle Fill** objects. You can also adjust the stitch angle in **Turning Angle Fill** and **Parallel Fill** objects using the **Reshape** tool.



Note You cannot change the stitch angle of **Border** objects as the stitches automatically turn to follow the shape. You can, however, change the stitch angle of **Parallel Fill Circle** objects by moving the stitch entry point.

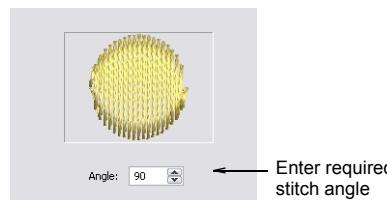
Adjusting Parallel Fill stitch angle using object properties

You can change the stitch angle of Parallel Fill objects using **Object Details**.

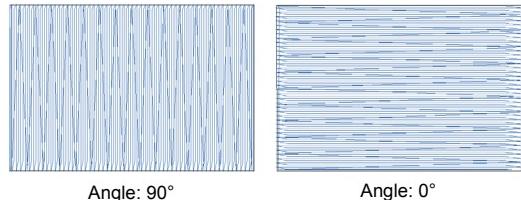


To adjust Parallel Fill stitch angles using object properties

- Select and double-click a Parallel Fill object. The **Object Details > Fill Stitch** tab opens.
- Select the **Parallel Fill** tab.



- Enter the required stitch angle in the **Fill Stitch Angle** field.
- Click **OK**.



Adjusting Parallel Fill stitch angle on-screen

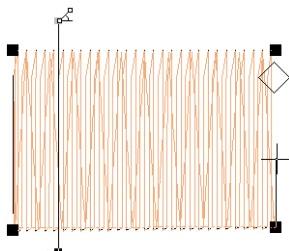


Click Reshape (Edit toolbar) to display control points and stitch angle lines in selected objects.

You can change the stitch angle of Parallel Fill objects using the **Reshape** tool.

To adjust Parallel Fill stitch angles on-screen

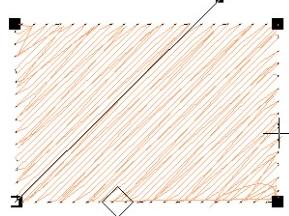
- 1 Select a Parallel Fill object.
 - 2 Click the **Reshape** icon.
- Control points appear together with a stitch angle line.



- 3 Click and drag the line as required.



Note Notice that the mouse pointer changes to a 'stitch angle mouse pointer'.



- 4 Press **Esc** to finish.



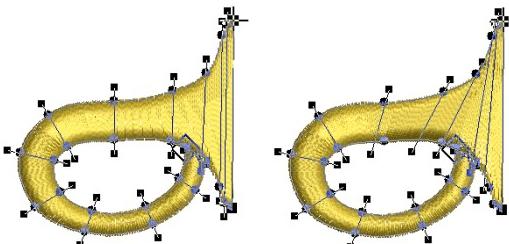
Try this! To minimize gaps in your embroidery, place the entry and exit points opposite each other on the outside boundary. Then define the stitch angle so it is perpendicular to the line between the entry and exit points.

Editing stitch angles in Reshape mode



Click Reshape (Edit toolbar) to display control points and stitch angle lines in selected objects.

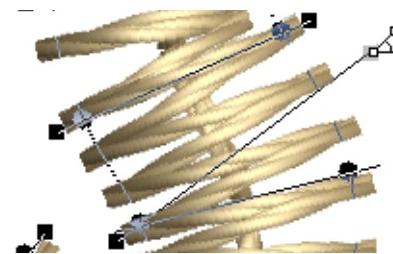
You can adjust the stitch angles of Lettering and Turning Angle Fill objects interactively using the **Reshape** tool. You can also add and delete stitch angles while in **Reshape** mode.



To edit stitch angles in Reshape mode

- 1 Select the lettering object.
- 2 Click the **Reshape** icon and click the letter outline.
- 3 Click-and-drag stitch angle points to their required positions.

The stitch angles change accordingly.



Note Notice that the mouse pointer changes to a 'stitch angle mouse pointer'.

- 4 Select and delete stitch angles by pressing the **Delete** button.
- 5 Holding down the **Ctrl** key, click the outline wherever you want to place a stitch angle line.
- 6 Press **Esc** to finish.

Changing entry and exit points

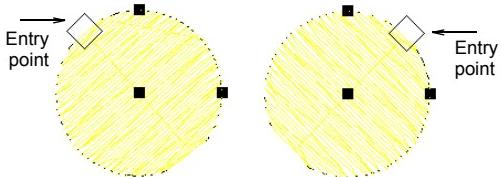


Use Reshape (Edit toolbar) to adjust the entry and exit points of selected objects.

You can change the stitch entry and exit points of individual objects. Do this to place the exit point next to adjoining objects for smaller connecting stitches, or to reduce the number of travel runs.

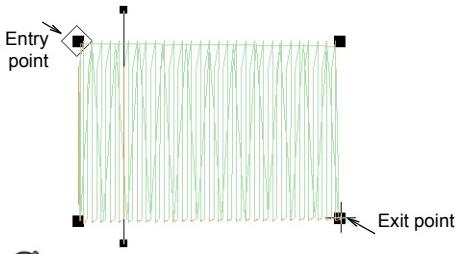


Note In **Circle** objects, the stitch angle is perpendicular to the line connecting the entry point to the circle center. Thus, changing the stitch entry point in a **Circle** object changes its stitch angle.



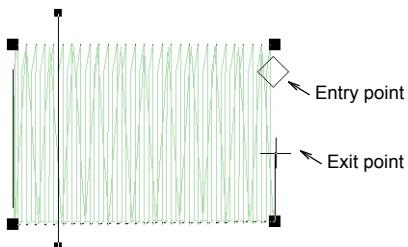
To change entry and exit points

- 1 Select the object to change.
- 2 Click the **Reshape** icon.
Control points appear, including entry and exit points.



Note In **Circle** objects, only the entry point appears.

- 3 Select the entry or exit point as required, and drag it to a different position on the object outline.



- 4 Press **Esc** to finish.

Part V

ADVANCED DIGITIZING

EasyDesign provides specialized productivity features as well as special effects and digitizing techniques.

Object details and templates

This section explains how to change the object details in your design, as well as how to apply, create and maintain templates in EasyDesign. See [Object Details and Templates](#) for details.

Improving stitch quality

This section describes how to strengthen and stabilize designs with underlays and how to compensate for fabric stretch. It also explains how to change fabric settings of existing designs. See [Improving Stitch Quality](#) for details.

Advanced digitizing techniques

This section describes how to create cut and fill holes in objects, as well as how to apply Feather Edge, Gradient Fill, and Travel on Edge effects to selected objects. Details of the Appliquédigitizing method are also provided. See [Advanced Digitizing Techniques](#) for details.

Stitch editing

This section describes how to select and edit the stitches in a stitch-based design, using Digitizer EX EasyEdit. See [Stitch Editing](#) for details.

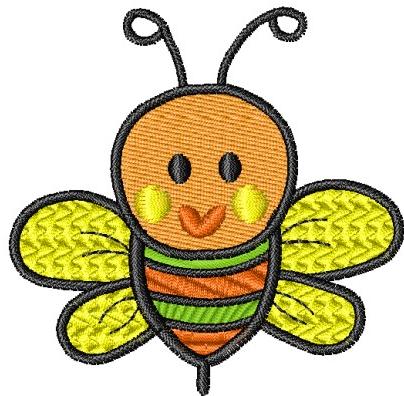
Chapter 18

OBJECT DETAILS AND TEMPLATES

Embroidery objects details include general characteristics such as size and position, as well as embroidery-specific characteristics such as stitch type and density. The particular stitch settings determine how stitches will be regenerated when you reshape, transform or scale an object.

When you start a new design, Digitizer EX uses the default settings or 'values' stored in the template. Most designs use the 'Normal' template, but you can create and use your own. In fact you can save any combination of settings in a template, such as favorite stitch or lettering settings.

This section explains how to change the object details in your design, as well as how to apply, create and maintain templates in EasyDesign.



Applying and managing object details

Digitizer EX stores three sets of object details – **default**, **current** and **existing**.



Note Some object details can be modified on-screen – for example, you can change the size details by scaling the object with the selection handles. Other details, such as stitch spacing or length, are modified in the **Object Details** dialog.

Default object details

Default object details are stored in a design template and become the starting settings used

when creating a new design based on that template.

Current object details

Current object details are the settings used to create new objects. Unless you change these settings, they remain the same as the template defaults. You generally change them to save time when digitizing. For example, you may preset the Satin Fill stitch setting to use a specific density for all new Satin objects you create.



Note The change affects new objects in the design, not the template itself. To apply changes to all new designs based on the current template, you need to change the **default** – not the **current** – details. See also [Working with fabrics](#).

Details of existing objects

Details of **existing** objects are the settings stored with each object in the design. You can make the details of a selected object into new current details or new defaults. You can also apply **current** details to existing objects.

Setting current object details



Use Object Details (Edit toolbar) to set details for the current design.

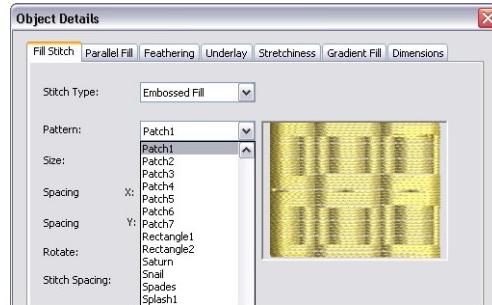
When you change **current** object details, the settings automatically apply to any new objects created in the current design. You can also apply **current** details to existing objects. Before starting, you can adjust current object details to new settings. You can only change the settings of objects **not** controlled by fabric settings. See also [Working with fabrics](#).



Note Settings of selected objects can override current fabric settings. See [Changing details of selected objects](#) for details.

To set current object details

- 1 Make sure no objects are selected.
- 2 Click the **Object Details** icon.
The **Object Details** dialog opens.

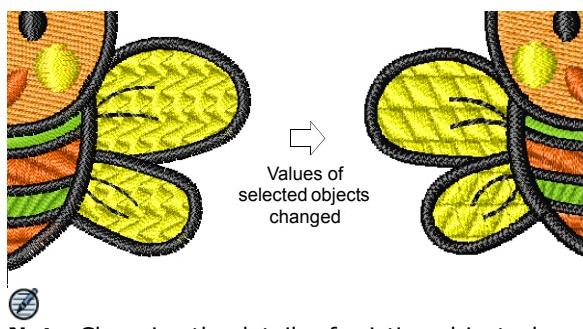


Tabs display at the top of the **Object Details** dialog. These provide access to all the possible object details settings.

- 3 Click a tab to view the current settings and change as required.
- 4 Click **OK**.

Changing details of selected objects

You can change the details of a selected object or objects. If you select more than one object, the **Object Details** dialog will only display tabs that include relevant settings for **all** selected objects. For example, if you select a Parallel Fill object and a Border object, neither **Parallel Fill** nor **Border** tabs will display as these settings do not apply to **both** objects. If selected objects have different current values for the same setting, the field will be blank. If you enter a new value, it will apply to both objects.



Note Changing the details of existing objects does **not** affect the current or default settings, nor the details of any objects **not** currently selected. See also [Working with fabrics](#).

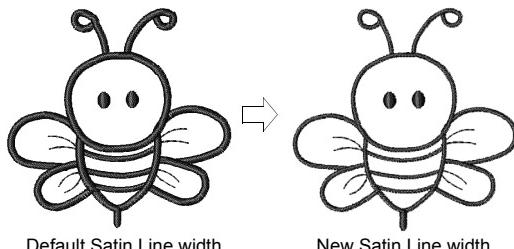
To change details of selected objects

- 1 Select the object/s whose details you want to change.
- 2 Double-click to open the **Object Details** dialog.

- 3 Select the tab you want and change the settings as required.
- 4 Click **OK**.

Changing default object details

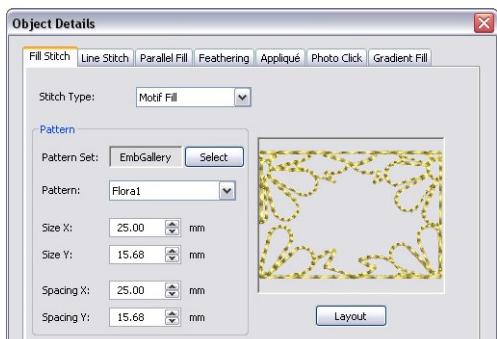
You can change default object details at any time by saving the details of the object you are working with to the current template. Only the settings for that object are saved. Other details retain their current settings. For example, if you make the details of a selected **Border** object the default, the default Parallel Fill settings will not change.



Note The change affects all new designs created using this template. If you only want the changes to apply to the design you are working in, change the **current** – not the **default** – details.

To change default object details

- 1 Select the object/s on which you want to base the defaults.
- 2 Double-click to open the **Object Details** dialog.



- 3 Select the tab you want and change the settings as required.
- 4 Click **Save**.

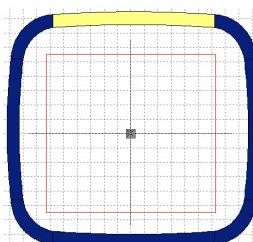
The object details are saved to the current template and will apply to any new objects in any design based on this template.



Note You can also create a new template using modified object details as defaults. See [Using design templates](#) for details.

Managing design templates

Templates are special files used to store default settings. Use templates when digitizing frequently-used design types so that you do not have to set the current details every time. For example, a template may include standard objects and sample lettering. It may simply have preferred stitch settings, lettering font and size, and colors set as current details. Or it may have special density, pull compensation or underlay settings set up to suit different fabrics.



Frequently used hoop or background color can be saved in the template

When you start Digitizer EX, it creates a blank design based on the Normal template. It then prompts you for the fabric you wish to use. When you select **File > New**, you are prompted to select a template. The template then uses whatever fabric is currently active when you first opened a design or created a new one from the **Getting Started** dialog.



Note Fabrics are a critical element of designs and are controlled separately from template values. Fabric settings are fewer in number than those contained in templates. Templates set the global values for your design but each design requires its own fabric settings which are saved with the design. See [Working with fabrics](#) for details.

The NORMAL template

The NORMAL template is the default template supplied with Digitizer EX. It contains current object details.

Creating design templates

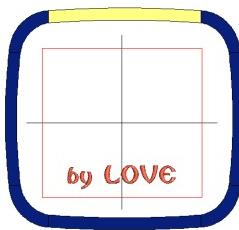
You create templates from designs containing the required objects and object details. Simply save the design, or elements of it, as a template. Templates look the same as design files, but use the file extension **JMT**.



Note You cannot overwrite templates by accident. Each time you create a new design from a template, Digitizer EX opens a duplicate. When you save the design the first time, the **Save As** dialog opens so you can save the template under a new name.

To create a design template

- 1 Start a new design or open an existing one.
- 2 Adjust the object details and effects as required.
- 3 Add the objects and lettering you want to appear in the template.



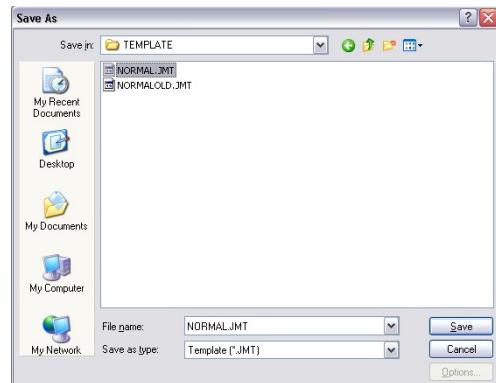
Lettering added to the template to display with every design



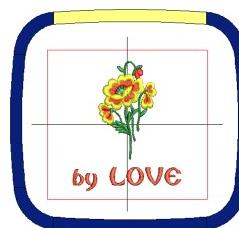
Try this! You can enter lettering baselines on their own but it helps to include sample text. You can overtype the sample text when using the template.

- 4 Select **File > Save As**.

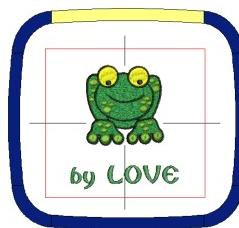
The **Save As** dialog opens.



- 5 Select **Templates (JMT)** from **Save as type** list.
- 6 Enter a name for the template in the **File name** field.
- 7 Click **Save**.



Design 1



Design 2

Using design templates

When you start a new design from the **File** menu, a list of the available templates appears in the **New** dialog. See [Creating new designs with custom templates](#) for details.



Note The template list only appears when you start a design from the **File** menu. If you select the **New** tool, the NORMAL template is applied by default.

Modifying design templates

You can modify templates in the same way as a normal design.



Note Changes apply only to future uses of the template. Existing designs based on the template are not affected.

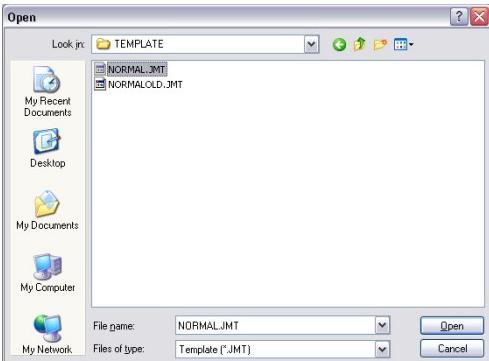
To modify design templates

- 1 Select File > Open.

The **Open** dialog opens.

- 2 Navigate to the Digitizer EX\Template folder, then select **Templates (JMT)** from the **Files of type** dropdown list.

The available template files display.



- 3 Select the template you want to modify and click **Open**.
- 4 Modify object details, styles and other settings as required.
- 5 Select File > Save As.

The **Save As** dialog opens.

- 6 From the **Save as type** dropdown list, select **Templates (JMT)**, and click **Save**.



Try this! To create a new template based on the modified one, type a new file name and click **Save**.

- 7 Click **Yes** to confirm.

The modified template is ready for use.

Saving current details to a template

You can easily save current object details to the current template. See also [Applying and managing object details](#).

To save current details to a template

- 1 Access the **Object Details** dialog.

- To use the **current** object details, deselect all objects, then click the **Object Details** icon.
- To use a particular object's details, select the object, then double-click it.



Click to save settings to template

- 2 Change object details settings as required.

- 3 Click **Save**.

A confirmation message appears.



Note Only the **current** object details – not the objects or other settings in the design – are saved to the template.

- 4 Click **OK** to update the template.

- 5 Click **OK** to return to the design window.

The new settings are saved in the template from which the design was created and are available for use.

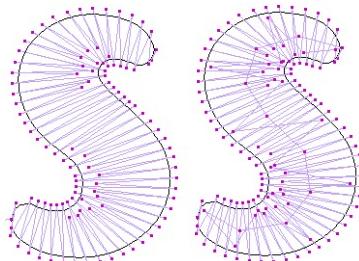
Deleting design templates

Delete templates in the same way as you would any other Windows file, using Windows Explorer. Templates are located in the Digitizer EX\Template folder.

Chapter 19

IMPROVING STITCH QUALITY

Embroidery appearance and quality depends a lot on underlay which serves as a foundation for the cover stitching. Without an underlay, embroidery lies flat on the underlying fabric which can often show through. New digitizers might be tempted to increase stitch density but it is much more effective to apply an underlay. Although it increases the stitch count, underlay helps to stabilize fabrics and reduce puckering and pulling especially on larger designs. It also provides 'loft', raising cover stitches and preventing them from sinking into soft fabrics. It can also prepare a napped fabric by flattening it.



Embroidery stitches pull fabric inward where the needle penetrates. This can cause fabric to pucker, and gaps to appear in the embroidery. For an object to sew out correctly, it must have correct stitch spacing, sufficient pull compensation together with a suitable underlay for the combination of cover stitch type, object type, object shape and fabric. Digitizer EX provides a set of optimized fabric settings so that the software will take into account the type of fabric you are stitching on.

This section describes how to strengthen and stabilize designs with underlays and how to compensate for fabric stretch. It also explains how to change fabric settings of existing designs.

Strengthening and stabilizing with underlays

Digitizer EX generates underlay stitching automatically based on current settings. These are stored with each object in the same way as other

object details. They are regenerated whenever the object is scaled or transformed. EasyDesign lets you adjust values to suit different fabrics, lettering appearance and size.

Larger areas and stretchy fabrics such as knits and pique generally need more underlay than smaller areas and firm fabrics such as drill or leather. At

times, when you want a full design with extra lift under the stitches, a weave underlay is preferable. On knits, edge run is best. See also [Working with fabrics](#).

Applying automatic underlay

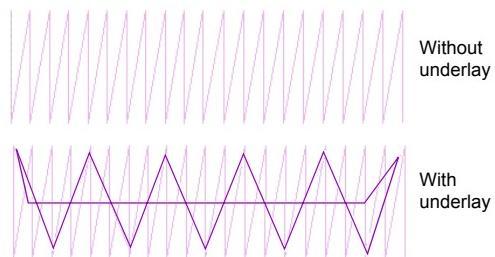


Use Underlay (Edit toolbar) to apply automatic underlay to new or selected objects.

The **Underlay** tool is a toggle button that allows you to apply automatic underlay to new or selected objects based on current settings. The **Underlay** button is deselected by default.

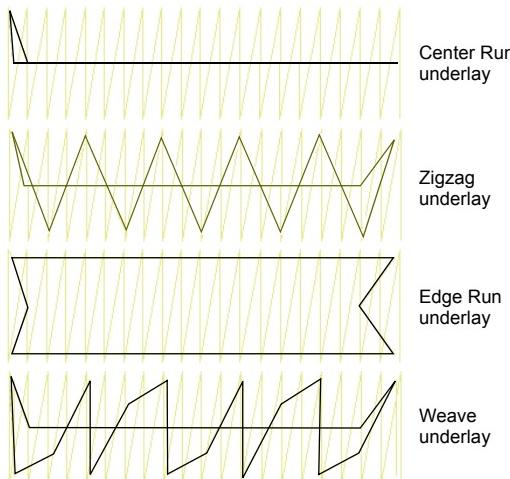
To apply automatic underlay

- With or without objects selected, click the **Underlay** icon.
With no objects selected, underlay stitches are automatically generated for all new objects. For both new or selected objects, automatically generated underlay stitches are based on current properties.
- With or without objects selected, click the **Underlay** icon to toggle the effect off.



Changing underlays

Digitizer EX provides a selection of underlay types to choose from:



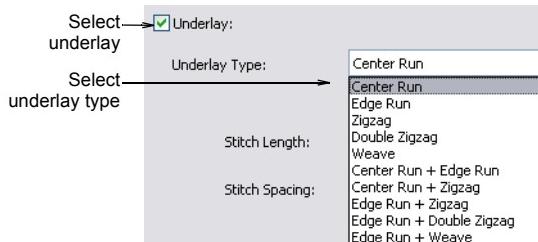
In addition to the basic underlay stitch types – Center Run, Zigzag, Edge Run, and Weave – Digitizer EX also provides a selection of underlay combinations such as Double Zigzag, Center Run + Zigzag, etc. This allows you to apply dual underlays to design objects.



Note Any combination containing Center Run cannot be used with Parallel Fill or Parallel Fill Rectangle objects.

To change underlays

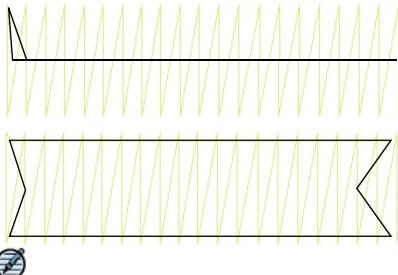
- Select and double-click a fill object. The **Object Details** dialog opens.
- Select the **Underlay** tab.



- If not already checked, select the **Underlay** checkbox.
- Make a selection from the **Underlay Type** list.
- Click **OK**.

Adjusting Center Run and Edge Run underlay settings

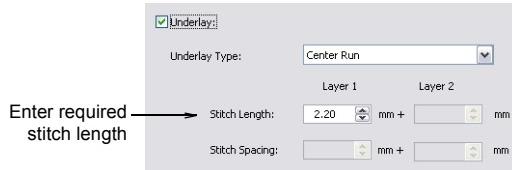
Center Run places a row of stitches along the center of a column. It is used to stabilize narrow columns – e.g. 2-3mm wide. Edge Run places stitches around the edge of an object.



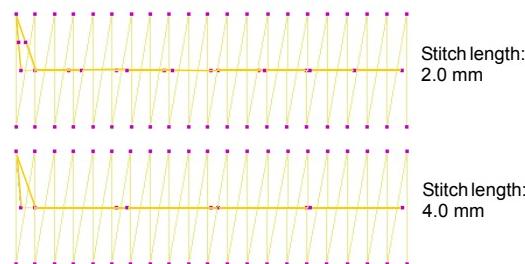
Note You cannot use **Center Run** with **Parallel Fill** or **Parallel Fill Rectangle** objects.

To adjust Center Run or Edge Run underlay settings

- 1 Select and double-click a fill object.
The **Object Details** dialog opens.
- 2 Select the **Underlay** tab.



- 3 Select **Center Run** or **Edge Run** from the **Underlay Type** list.
- 4 Adjust **Stitch Length** setting as required:

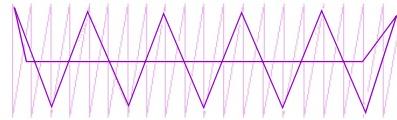


- 5 Click **OK**.

Adjusting Zigzag underlay settings

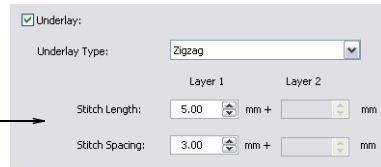
Use Zigzag underlay stitching to support wide columns. You can set stitch length properties for

Zigzag underlay. The stitch length is the length of each zigzag stitch.

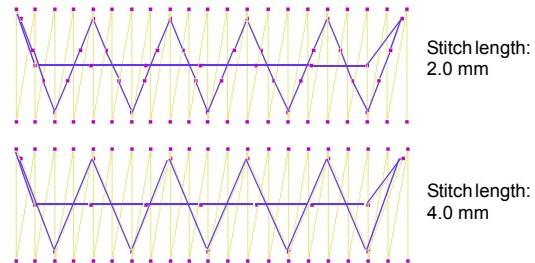


To adjust Zigzag underlay settings

- 1 Select and double-click a fill object.
The **Object Details** dialog opens.
- 2 Select the **Underlay** tab.



- 3 Select **Zigzag** from the **Underlay Type** list.
- 4 Adjust **Stitch Length** and **Stitch Spacing** settings as required:



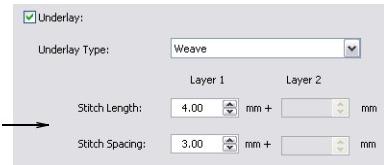
- 5 Click **OK**.

Adjusting Weave underlay settings

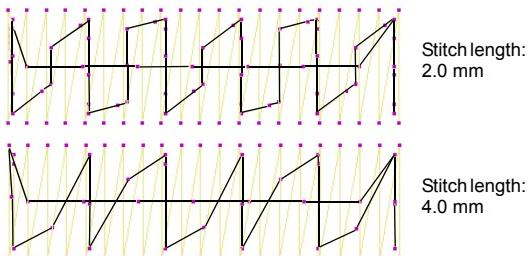
Weave underlay is used to stabilize large, filled shapes. It resembles an extremely open Weave fill stitch, where rows of stitches are placed across the object to create the underlay.

To adjust Weave underlay settings

- 1 Select and double-click a fill object.
The **Object Details** dialog opens.
- 2 Select the **Underlay** tab.



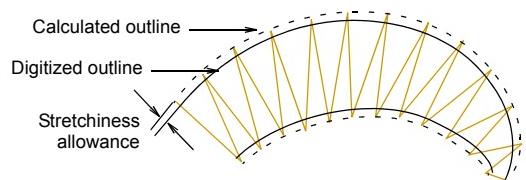
- 3 Select **Weave** from the **Underlay Type** list.
- 4 Adjust **Stitch Length** and **Stitch Spacing** settings as required:



- 5 Click **OK**.

Compensating for fabric stretch

Embroidery stitches tend to pull fabric inwards where the needle penetrates. This can cause fabric to pucker, and gaps to appear in the embroidery. Experienced digitizers can manually compensate for pull by overlapping objects as they digitize. The **Stretchiness Allowance** setting in Digitizer EX, however, counters the pull effect by 'overstitching' outlines of filled shapes on the sides where the needle penetrates.



Adjust the amount of overstitching you need by varying the stretchiness allowance. This is handy if you want to stitch a design on fabrics with varying degrees of stretch. See also [Working with fabrics](#).

Appropriate pull compensation settings vary with the type of fabric – stretchy, pile, etc – hooping method – tight or loosely hooped – and size of embroidery object – wide or narrow columns. Use the following table as a guideline.

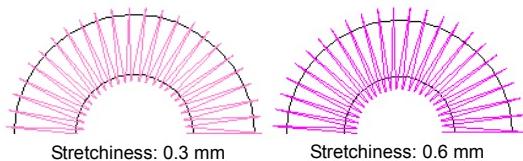
Fabric	Stretchiness allowance (mm)
Drills, cotton	0.20
T-shirt	0.35
Fleece, jumper	0.40
Lettering	0.2 - 0.3

To compensate for fabric stretch

- 1 Select and double-click a fill object. The **Object Details** dialog opens.
- 2 Select the **Stretchiness** tab.



- 3 If not already checked, select the **Stretchiness Allowance** checkbox.
- 4 Enter the amount (in millimeters) by which you want to overstitch.



- 5 Click **OK**.

Working with fabrics

Embroidery stitches pull fabric inward where the needle penetrates. This can cause fabric to pucker, and gaps to appear in the embroidery. For an object to sew out correctly, it must have correct stitch spacing, sufficient pull compensation together with a suitable underlay for the combination of cover stitch type, object type, object shape and fabric. Digitizer EX provides a set of optimized fabric settings so that the software will take into account the type of fabric you are stitching on.



Fabrics are a critical element of designs and are controlled separately from template values. Fabric settings are fewer in number than those contained in templates. Templates set the global values for your design but each design requires its own fabric settings which are saved with the design.



Note Because fabrics are not part of the template, when you create a new design and possibly change templates, Digitizer EX uses the current fabric. You can continue to use that fabric, change it immediately or change it later. See also [Managing design templates](#).

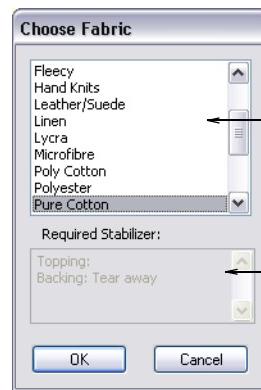
Changing fabric settings

You can change fabric settings of existing designs. Choose from a set of pre-defined fabrics aimed at minimizing stitching defects when designs are sewn out. These make the necessary changes to the system settings – e.g. 'stretchiness'. The new settings can be applied to all applicable objects – all object types other than Motif Fill, Appliquéd, Photo Click, as well as Single and Triple Run. Objects can subsequently be modified via **Object Details**. See [Changing details of selected objects](#) for details.

To change fabric settings

- 1 Select individual objects in your design as required.
- 2 Select **Setup > Choose Fabric**.

The **Choose Fabric** dialog opens.



- 3 Select a fabric type from the list. The **Required Stabilizer** field displays the name of one or more recommended stabilizers and any other relevant information.
- 4 Click **OK**. Stitch settings will be automatically adjusted for all applicable objects – i.e. all object types other than Motif Fill, Appliquéd, Photo Click, Single Run and Triple Run.

Managing fabrics

In addition to the pre-defined fabric settings, you can create your own custom fabric settings to suit particular needs. You can also modify, rename or delete any custom fabrics you create.

To manage fabrics

- 1 Select **Setup > Manage Fabrics**. The **Manage Fabrics** dialog opens.



Note If you already have custom fabrics defined, you have the option of editing, renaming, or deleting.

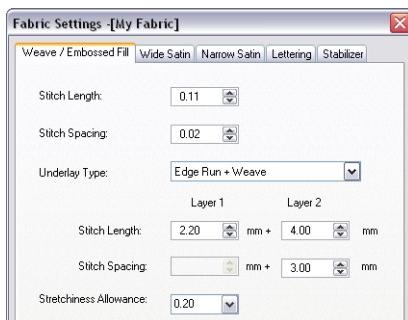
- 2 To create a new fabric type, click **New**.

The **New Fabric** dialog opens.

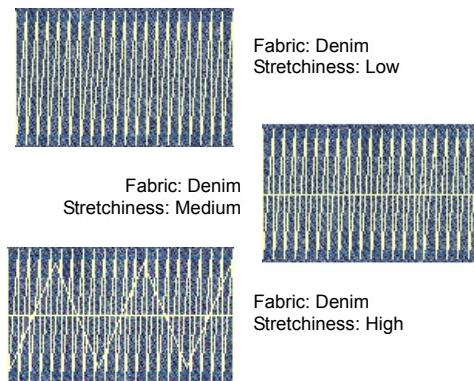


- 3 Change the **Based on Fabric** setting as required.
 4 Enter a descriptive name for the fabric type in the **New Fabric Name** field and click **OK**.

The **Fabric Settings** dialog opens. This dialog allows you to set the fabric values for four object groups – Weave/Embossed Fill, Wide Satin, Narrow Satin, and Lettering – as well as enter details of any recommended stabilizers.



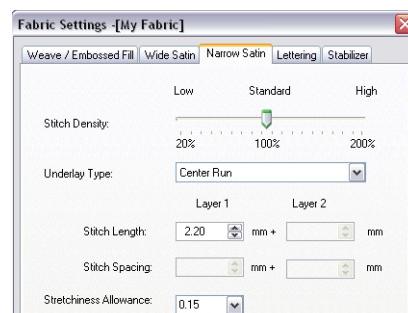
- 5 Adjust the **Stitch Length** and **Stitch Spacing** settings for your Weave / Embossed Fill objects as required:
- Weave Fill stitch consists of rows of run stitches and is suitable for filling large, irregular shapes. See [Creating Weave fills](#) for details.
 - Embossed Fill is a decorative stitch type. Use it to fill wide and large areas with unique artistic effects while keeping the appearance of a solid field of stitching. See [Creating Embossed fills](#) for details.
- 6 Set a suitable underlay type for Weave and Embossed Fill objects. See [Strengthening and stabilizing with underlays](#) for details.
- 7 Set a stretchiness allowance for Weave and Embossed Fill objects. See [Compensating for fabric stretch](#) for details.



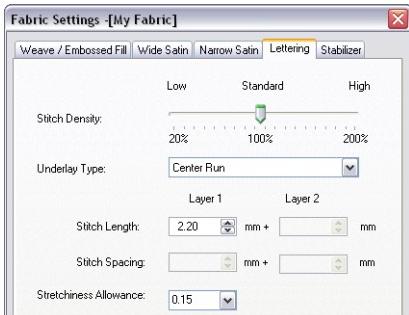
- 8 Click the tab to access the **Wide Satin** settings. These settings will become the defaults for larger Satin objects. See [Creating Satin fills](#) for details.



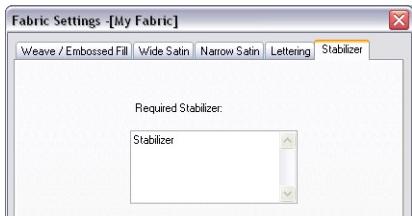
- 9 Adjust the **Wide Satin** settings as you did for Weave / Embossed Fill objects.
-
- Note** Instead of **Stitch Length** and **Stitch Spacing** settings, you have a single density setting which is controlled by a slider bar.
- 10 Click the tab to access the **Narrow Satin** settings and adjust as you did for Wide Satin objects. See [Creating Satin fills](#) for details.



- 11 Click the tab to access the **Lettering** settings and adjust as you did for Narrow Satin objects. See [Applying different stitch types to lettering objects](#) for details.



- 12 Click the tab to access the **Stabilizer** settings.



- 13 Key in one or more recommended stabilizer(s) in the **Required Stabilizer** field, together with a description or any other relevant information on the stabilizer for the custom fabric. This information will be displayed in the **Choose Fabric** dialog. See [Changing fabric settings](#) for details.

- 14 Click **OK**.

Chapter 20

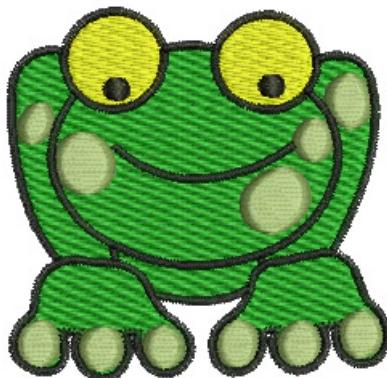
ADVANCED DIGITIZING TECHNIQUES

Digitizer EX provides specialized digitizing features to enhance your embroidery. Use the **Cut Hole** tool to cut holes in objects in order to prevent a build-up of stitch layers where they are not needed. The **Fill Holes** function fills holes in selected Parallel Fill objects either by removing them altogether or by creating new objects based on the holes in the original object.

Use **Feather Edge** to create rough edges, to create shading effects, or to imitate fur or other fluffy textures in your design.

Gradient Fill is an artistic stitch effect that gradually varies the stitch spacing between dense and open fill along an embroidery object. It allows you to easily create different shading and color effects. In Digitizer EX, the **Travel on Edge** effect is typically used in combination with open Weave Fill stitching to fill backgrounds or for shading effects. Automatically create all the stitching you need for **appliqué** using the **Appliqué** tool. Up to three layers of stitching – guideline, tack and cover – are generated, depending on current settings.

This section describes how to create cut and fill holes in objects, as well as how to apply Feather Edge, Gradient Fill, and Travel on Edge effects to selected objects. Details of the Appliqué tool are also provided.



Reinforcing outlines

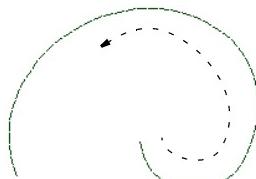


Use Backtrack (Edit toolbar) to reinforce open outlines by double-stitching in reverse direction.

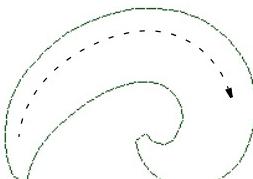


Use Repeat (Edit toolbar) to reinforce closed outlines by double-stitching in the same direction.

Use **Backtrack** and **Repeat** to reinforce outlines while specifying the direction of the stitching. Backtrack stitches in reverse direction to the original. It is typically used to make run stitch outlines thicker without creating unwanted connecting stitches. Repeat duplicates the original stitch direction and is typically used with closed shapes. The tools are enabled if Single Run Lines, Triple Run Lines, or Satin Lines are selected.



Use Backtrack for open shapes



Use Repeat for closed shapes



Note If you use **Repeat** for open shapes, a connecting stitch is inserted from the end to the start of the object which will require trimming.

To reinforce outlines

- 1 Select the object (or objects) to reinforce.

The tools are enabled if one or more of these objects are selected – Single Run Lines, Triple Run Lines, or Satin Lines.

- 2 Choose the best tool for the task, depending on whether you have chosen an open or closed object:

- Click the **Backtrack** icon to reinforce open outlines by double-stitching in reverse direction.
- Click the **Repeat** icon to reinforce closed outlines by double-stitching in the same direction.

The object is duplicated and placed on top of the original. It is the same color and is positioned after it in the stitching sequence.

- 3 Check that the object has been duplicated by using one of the following methods:

- Check the stitch count in the Status Line.
- Use Slow Redraw. See [Redrawing the stitching sequence slowly](#) for details.

- Travel through the stitches. See [Traveling through the stitching sequence in EasyDesign](#) for details.

Cutting holes in objects



Use Cut Hole (Edit toolbar) to cut holes in selected objects.

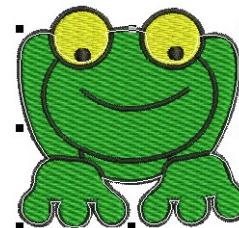
Use the **Cut Hole** tool to cut holes in objects in order to maintain shapes but eliminate areas of stitching. Prevent a build-up of stitch layers where they are not needed. See also [Filling holes in objects](#).



Note Cut Hole cannot be used with objects created with the **Parallel Fill Circle** or **Turning Angle Fill** objects.

To cut holes in objects

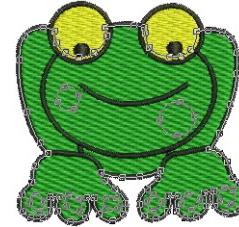
- 1 Select the **Parallel Fill** object in which you want to cut a hole.



Select the object to cut a hole in

- 2 Click the **Cut Hole** icon.

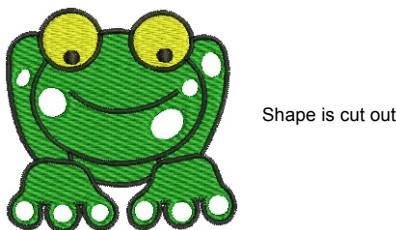
- 3 Digitize the shape you want to cut.



Digitize the shape to cut out

- 4 Press **Enter**.

- 5 Press **Enter** again to remove the stitches from the digitized area.



Filling holes in objects

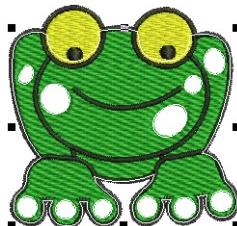


Use Fill Holes (Edit toolbar) to fill holes in selected objects.

The **Fill Holes** function fills holes in selected Parallel Fill objects – excluding objects created with the **Parallel Fill Circle** tool – either by removing them altogether or by creating new objects based on the holes in the original object. See also [Cutting holes in objects](#).

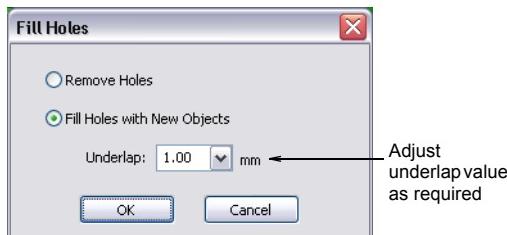
To fill holes in objects

- 1 Select the source object.

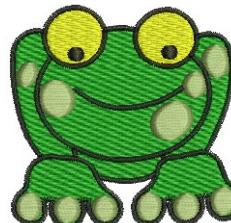


- 2 To use the default settings, simply click the **Fill Holes** icon.
- 3 To control overlaps or remove holes altogether, select **Edit > Fill Holes**.

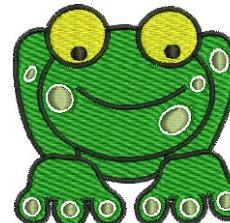
The **Fill Holes** dialog opens.



- 4 Choose to remove holes altogether or create new objects.
- 5 If you choose to create new objects, adjust the **Underlap** value as required.



Underlap: 1.00



Underlap: -1.00

- ◆ To cover holes exactly, accept the default value of **0.00**.
- ◆ To overlap the filled holes and the original object, enter a positive offset – e.g. **1.00**. Overlapping the objects prevents gaps appearing.
- ◆ To leave a gap between the filled holes and the original object, enter a negative offset – e.g. **-1.00**.

- 6 Click **OK**.

All holes are converted to Parallel Fill objects with the same fill stitch settings, stitch angle, stitch effects and thread color as the source object.

Creating feathered edges

Use **Feather Edge** to create rough edges, to create shading effects, or to imitate fur or other fluffy textures in your design.



Applying Feather Edge



Click Feather Edge (Edit toolbar) to apply the effect to new or selected objects.

Apply **Feather Edge** to create a rough edge along one or more sides of an object. **Feather Edge** is applied using the current **Feather Edge** settings in the **Object Details** dialog. Change these settings before or after applying the effect. See [Adjusting Feather Edge settings](#) for details.

To apply Feather Edge

- Click the **Feather Edge** icon.

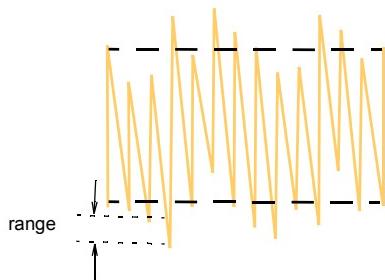
The effect is applied to new or selected objects, based on the current **Feather Edge** settings.

Adjusting Feather Edge settings



Right-click **Feather Edge** (Edit toolbar) to adjust settings.

Adjust the **Feather Edge** settings to change the amount of feathering, the side of the object to which the effect is applied and the margin in which the stitches should fall.

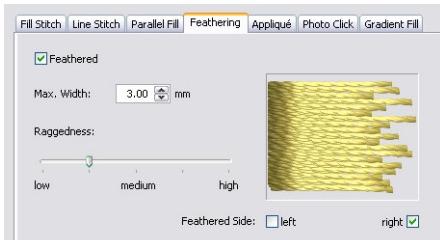


To adjust Feather Edge settings

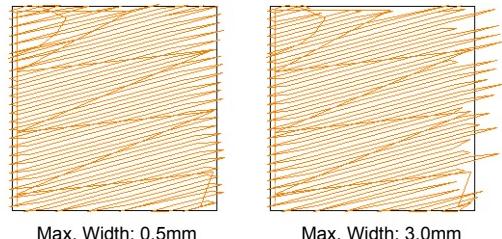
- Select and double-click the object.

The **Object Details** dialog opens.

- Select the **Feathering** tab.



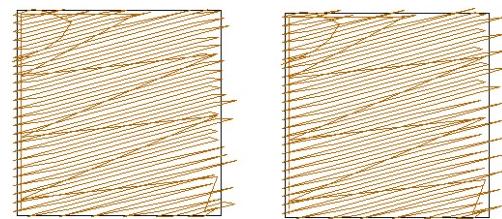
- Select the **Feathered** checkbox.
- Enter a **Maximum Width** for the feathering, this is the margin in which the stitches will fall.



Max. Width: 0.5mm

Max. Width: 3.0mm

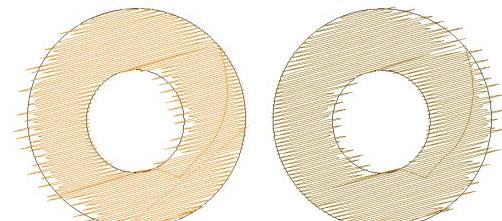
- Use the **Raggedness** slider to indicate the required degree of texture:
 - left for a smooth texture
 - right for a rough texture.



Raggedness: Low
less variation in stitch length

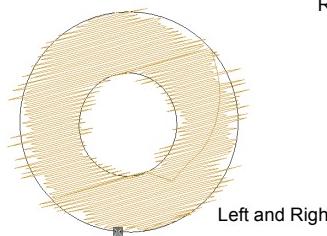
Raggedness: High
more variation in stitch length

- Select the **Feathered Side** checkbox you require: left or right or both.
- Click **OK**.



Left

Right



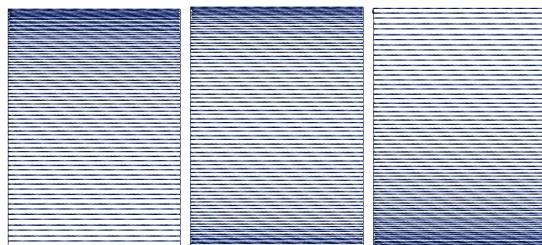
Left and Right

Creating gradient fill effects



Use Gradient Fill (Edit toolbar) to vary stitch spacing between dense and open fill. Right-click to adjust settings.

Gradient Fill is an artistic stitch effect that gradually varies the stitch spacing between dense and open fill along an embroidery object. It allows you to easily create different shading and color effects.



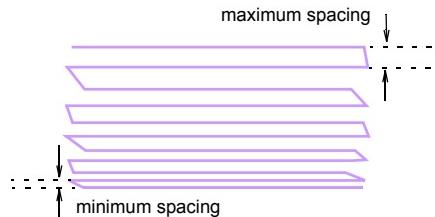
Try this! Apply **Travel on Edge** effect to force underlying travel runs to the edges of an object so that they can't be seen through open stitching. See [Creating open stitching effects](#) for details.

Applying Gradient Fill



Click Gradient Fill (Edit toolbar) to apply the effect to new or selected objects.

Use Gradient Fill to create perspective effects and shading. It can be applied to Satin Fill, Weave Fill, Embossed Fill or Satin Border objects.

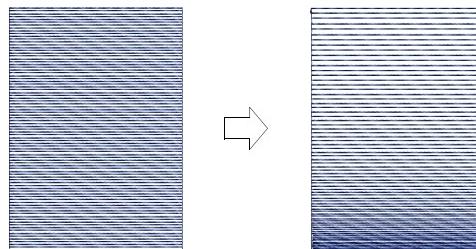


You can apply it using current settings. These can be adjusted and the type of Gradient Fill changed either before or after you apply it.

To apply Gradient Fill

- Click the **Gradient Fill** icon.

The effect is applied to new or selected objects, based on the current **Gradient Fill** settings.



Adjusting Gradient Fill settings



Right-click Gradient Fill (Edit toolbar) to adjust settings.

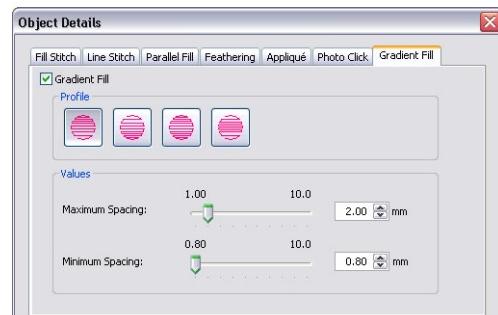
Use the **Object Details** dialog to select the **Gradient Fill** type and set the minimum and maximum spacings.



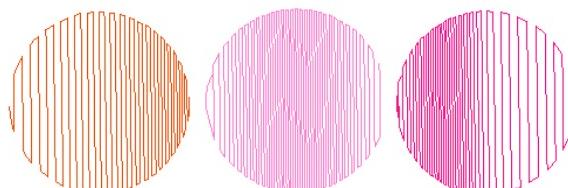
Try this! Because of the open stitch, **Gradient Fill** is best used without underlay.

To adjust Gradient Fill settings

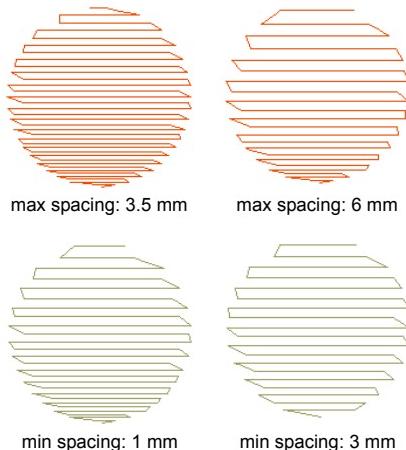
- Right-click the **Gradient Fill** icon.
The **Object Details > Gradient Fill** dialog opens.



- Select the **Gradient Fill** checkbox.
- In the **Profile** panel, click a **Gradient Fill** icon.



- 4 In the **Values** panel, enter new spacing values as required.
- Maximum Spacing: the largest spacing value to allow.
 - Minimum Spacing: the smallest spacing value to allow.



Try this! Apply **Travel on Edge** effect to force underlying travel runs to the edges of an object so that they can't be seen through open stitching. See [Creating open stitching effects](#) for details.

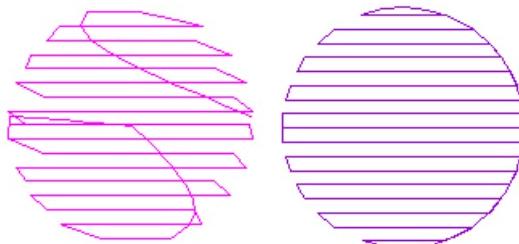
- 5 Click **OK**.

Creating open stitching effects



Use Object Details (Edit toolbar) to set details for the current design.

In Digitizer EX, the **Travel on Edge** effect is typically used in combination with open Weave Fill stitching to fill backgrounds or for shading effects where the absence of travel runs under the fill is more important than exact spacing. It is available for use with Parallel Fill or Parallel Fill Rectangle objects using Weave Fill stitching.

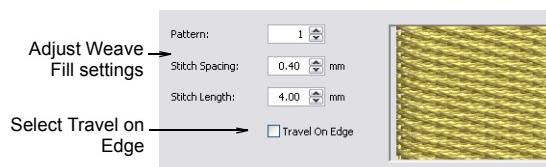


Travel on Edge automatically moves underlying travel runs to the edges of an object so they can't be seen. It also applies consistent row spacing and prevents segments from overlapping. Without it, travel runs, spacing variations and overlapping rows between segments are visible and can spoil the effect of open stitching. Another use of Travel on Edge is with gradient fill effects. Gradient Fill extends the usefulness of Travel on Edge by providing a simple way to produce variation in a filled pattern and the illusion of depth in a design. See also [Creating gradient fill effects](#).

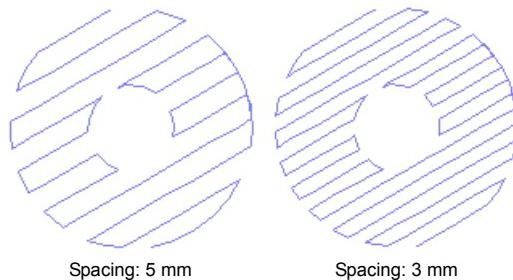
To create open stitching effects

- 1 Choose whether you want to apply Travel on Edge to an existing object or all newly created objects:
 - With no objects selected, click the **Object Details** icon.
 - Select and double-click an existing Weave Fill object.

The **Object Details > Fill Stitch** dialog opens.



- 2 With Weave Fill selected as the stitch type, tick the **Travel on Edge** checkbox.
Travel on Edge is automatically checked when Stitch Spacing is greater than 0.80 mm or when Gradient Fill is selected, but it can be unchecked at any time.
- 3 Adjust the **Stitch Spacing** setting as required.
The larger the value, the more open the spacing.

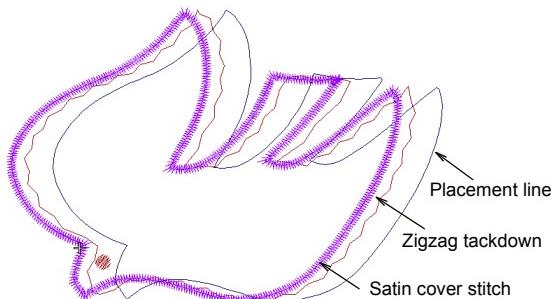


- 4 Adjust other Weave Fill settings as required. See [Creating Weave fills](#) for details.
- 5 Click **OK**.
Travel runs and overlapping rows are removed and consistent row spacing applied.

Digitizing appliqué

Automatically create all the stitching you need for appliqué using the **Appliqué** tool. You can control cover stitch settings, including stitch type – Satin or E-Stitch – width, stitch spacing, as well as offset. Up to three types of ‘secondary objects’ can be generated:

- **Placement lines:** These are the first appliqué layer to be stitched. Placement lines are used to position pre-cut appliqué patches on the background material.
- **Cutting lines:** Cutting lines form a guide when trimming the appliqué patch in position.
- **Tackdown:** This zigzag stitch is used to fix appliqué patches to the background fabric before cover stitching is applied.



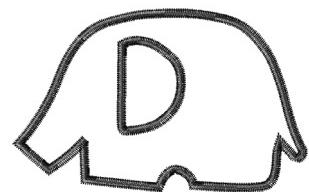
Note A ‘frame out’ position is automatically set. During stitchout, this shifts the hoop out from under the needle, making it easier to place and trim the appliqué shapes.

Creating appliqué objects



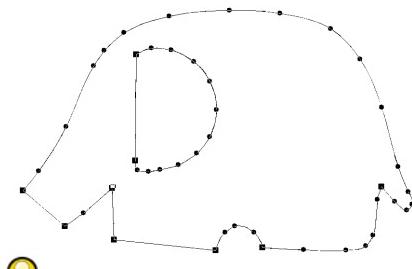
Use Appliqué (Digitize toolbar) to digitize appliqué objects.

Use **Appliqué** to produce the stitching you require for **appliqué** objects. These are digitized in the same way as Parallel Fill objects. Up to four layers of stitching – placement lines, cutting lines, tackdown and cover stitches – can be generated for each appliqué object, depending on current settings. See also [Adjusting appliqué settings](#).



To create appliqué objects

- 1 Insert an image for use as a digitizing backdrop as required. See [Inserting images](#) for details.
- 2 Click the **Appliqué** icon.
- 3 Digitize the boundary of the appliqué, by marking reference points around the outline of the shape.
 - ♦ Click to create a corner point.
 - ♦ Right-click to create a curve point.



Try this! Follow the prompts in the **Status Line** to help you digitize. If you make a mistake, press **Backspace** to delete the last reference point, then continue digitizing.

- 4 Press **Enter** to close the shape.
- 5 Click the outline to set the stitch entry and exit points or press **Enter** to accept the defaults.

6 Press Enter.

Up to four layers of stitching – placement line, cutting line, tackdown and cover stitch – are generated for the appliqué object according to current settings.



Try this! When you stitch out an appliqué object, the machine stops between layers. Before you start, lay the fabric over the design and start the machine. When the guideline has been stitched, trim the excess appliqué material and start the machine again for the tackdown and cover stitch. If you are using a cutting line, place the fabric patch after the placement line has been stitched, then trim in position after the cutting line has been stitched. See [Adjusting appliqué settings](#) for details.

Adjusting appliqué settings

The cover stitch is the border around the [appliqué](#) shape. You can change stitch type – Satin or Blanket – cover stitch width, as well as offset in relation to the inside or outside of the digitized outline. Up to four layers of stitching – placement line, cutting line, tackdown and cover stitch – can be generated for each appliqué object, depending on the settings you choose. You can control various cover stitch settings including stitch type – Satin or Blanket – width, stitch spacing, as well as offset.

To adjust appliqué settings

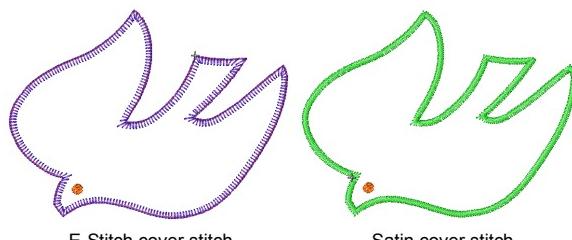
1 Select and double-click the applique object.

The **Object Details** dialog opens.

2 Select the **Fill Stitch** tab.



3 Select a cover stitch from the **Stitch Type** dropdown list – **Satin** or **Blanket**.



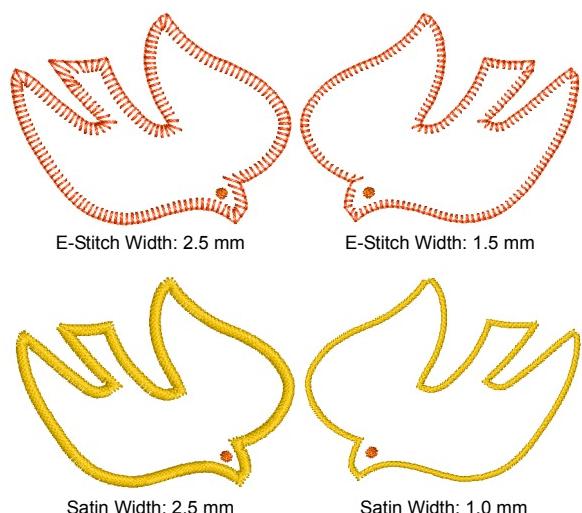
4 Move the slider to adjust stitch density:

- To increase stitch density, move the slider to the right.
- To reduce the density for more open stitching, move the slider to the left.

5 Select the **Appliqué** tab.

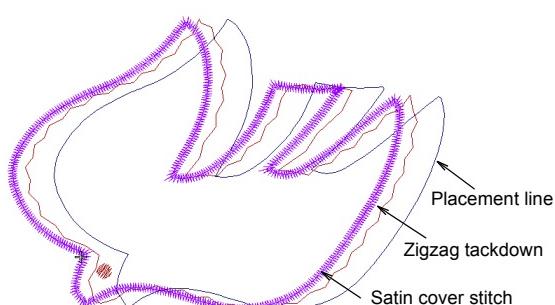


6 Adjust the cover stitch width as required.



7 Select an appliqué ‘style’:

- **Pre-cut:** Placement lines, tackdown and cover stitches are generated.

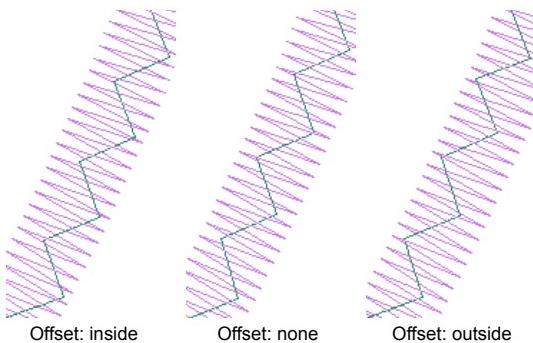


- **Trim in Place:** In addition, a cutting line is generated.



Note If you choose to generate a cutting line, place the fabric patch after the placement line has been stitched, then trim in position after the cutting line has been stitched.

- 8 Use the **Inside** and **Outside** percentage settings to adjust the cover stitch and tackdown offset.



For Satin stitch, the cover stitch and tackdown are offset against the placement line using the slider. The offset can be inside or outside the appliquéd boundary. For Blanket stitch, the offset is always 100% inside.

- 9 Click **OK**.

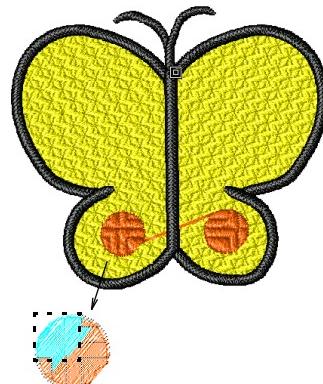
Chapter 21

STITCH EDITING

With Digitizer EX EasyDesign stitches are automatically generated from design outlines and properties. This means you can scale, transform and reshape Digitizer EX designs without affecting stitch density or quality.

The Digitizer EX EasyEdit application allows you to work with traditional stitch-based designs in the SEW or JEF format. Using EasyEdit, you can fine-tune your designs without having to convert them into JAN format. EasyEdit lets you edit individual stitches. You simply select them like any other object and move the needlepoint position as required. You may need to do this particularly when working with 'stitch' files which do not contain design outline data. See [Embroidery design formats](#) for details.

This section describes how to select and edit the stitches in a stitch-based design, using Digitizer EX EasyEdit.



Selecting stitches

The **Stitch Mode** tool lets you select single stitches, several stitches, or a range of stitches by selecting their needle points, or dragging a bounding box around them. Selected stitches are highlighted in a different color.

Selecting all stitches in a design

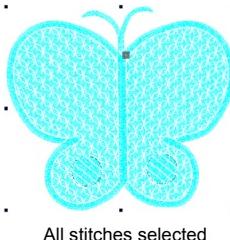
Select all stitches to apply changes to a whole design. See also [Quick Reference](#).

To select all stitches in a design

- ◆ Select **Edit > Select All** or press **Ctrl + A**.
Sizing handles appear around the entire design.



No stitches selected



All stitches selected

- To deselect, press **X** or **Esc**.

Selecting stitches by needle point



Use Stitch Mode (Edit toolbar) to select individual stitches for editing.

You can select individual stitches in **Stitch Mode** by selecting their needle points.

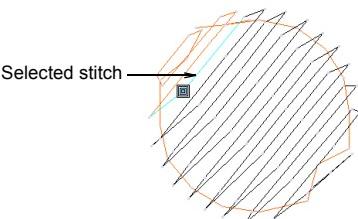


Try this! Zoom in and display the needle points for easier selection.

To select stitches by needle point

- 1 In EasyEdit, click the **Stitch Mode** icon.
- 2 Click a needle point.

The needle point changes color and the needle position marker moves to the selected stitch. All stitches after the needle position marker in the stitching sequence appear in black.



Selecting stitches with a bounding box



Click Stitch Mode (Edit toolbar) to select stitches with a bounding box.

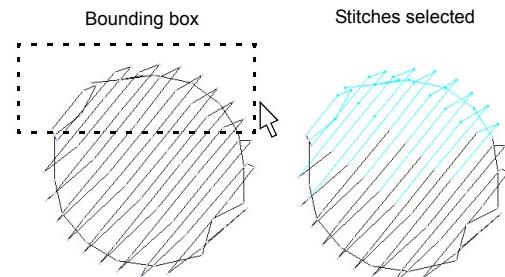
In EasyEdit you can quickly select all stitches in a group by dragging a bounding box around them.

To select stitches with a bounding box

- 1 Click the **Stitch Mode** icon.

- 2 Drag a bounding box around the stitches you want to select.

Stitches are selected when you release the mouse button.



Selecting stitches while traveling

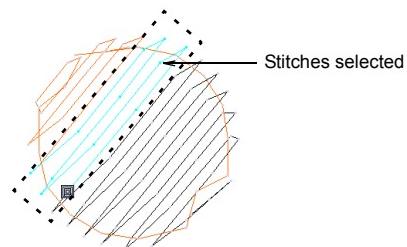


Use Stitch Select While Traveling (View toolbar) to select stitches while traveling.

In EasyEdit, you can select stitches as you 'travel' through the design. Traveling is usually associated with checking the stitching sequence. See also [Stitch Editing](#).

To select stitches while traveling

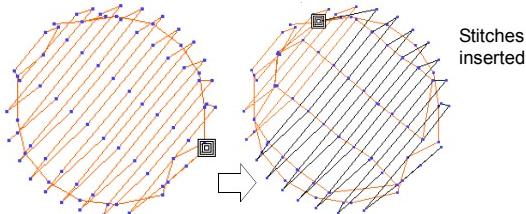
- 1 In EasyEdit, use the travel tools to travel to the first stitch you want to select.
 - 2 Click the **Stitch Select While Traveling** tool on the **Edit** toolbar.
 - 3 Click the **Stitch Mode** tool.
- Continue traveling through the design. As you select, the stitches/objects become selected.



- 4 When you have finished selecting, click the **Stitch Select While Traveling** tool again to turn it off.

Editing stitches

In EasyEdit you can insert stitches in an object to fill gaps. You can move or delete individual or clusters of selected stitches.



Inserting stitches

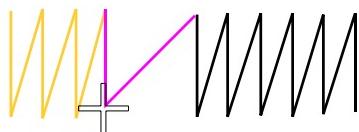


Use Stitch Mode (Edit toolbar) to insert stitches in an object.

You can insert stitches in an object to fill gaps. Inserted stitches are considered part of the object (rather than independent objects). Where possible, edit the object properties rather than individual stitches. For example, to increase stitch density, reduce spacing rather than insert stitches.

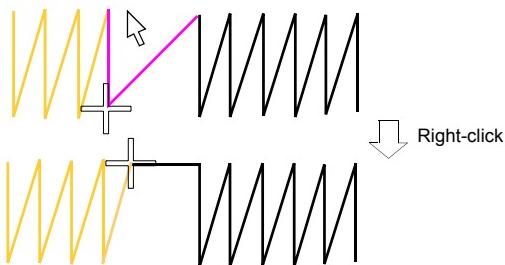
To insert stitches

- 1 In EasyEdit, click the **Stitch Mode** icon.
- 2 Zoom into the area you want to edit.
- 3 Select a needlepoint.

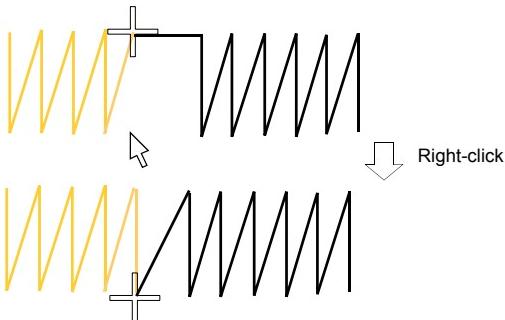


The stitch changes color and the needle position marker moves to the selected stitch.

- 4 Move the mouse pointer where you want to insert the new stitch, and right-click.



- 5 Move the mouse to where you want to insert the next stitch, and right-click.



- 6 Continue right-clicking as required.

Moving stitches

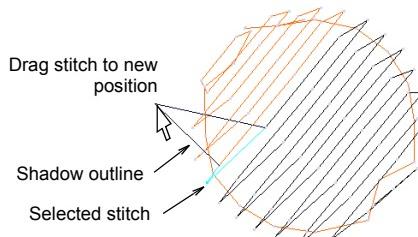


Use Stitch Mode (Edit toolbar) to select individual stitches for moving.

In EasyEdit, you can move individual or groups of selected stitches.

To move stitches

- 1 In EasyEdit, click the **Stitch Mode** icon.
- 2 Select stitches and drag them to a new position. The stitch shadow outline shows the new position.
- 3 Press **Enter**.



Splitting stitch blocks



Use Stitch Mode (Edit toolbar) to select individual stitches for deletion.

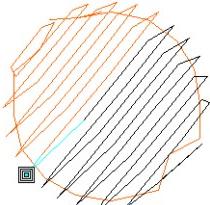


Use Split Block (Edit toolbar) to split the design at a selected needlepoint.

In both EasyEdit and EasyDesign, you can split large stitch blocks into fragments in order to reposition, transform or resize them in the design, or delete them altogether.

To split stitch blocks

- 1 Select the object you want to split.
- 2 If working in EasyEdit, click the **Stitch Mode** icon.
- 3 Travel to the stitch needlepoint where you want to split the object. See [Traveling by stitches](#) for details.

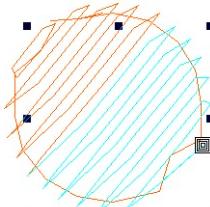


Locate the needle point at which you want to split the object



Try this! In EasyEdit, simply click the needle point at which you want to split the stitch block.

- 4 Click the **Split Block** icon.
This splits the object at the selected needlepoint – stitches that come before and after in the stitching sequence are split into separate objects or 'stitch blocks'.



Split into two blocks

Deleting stitches



Use Stitch Mode (Edit toolbar) to select individual stitches for deletion.

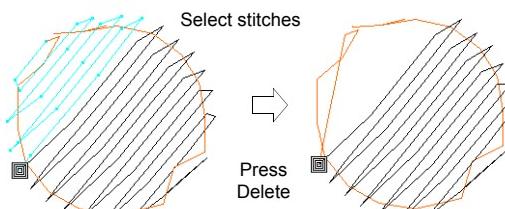
You can delete individual or groups of selected stitches.



Warning If an object's stitches are regenerated for any reason, all stitch editing functions are lost. Where possible, edit the object properties rather than individual stitches. See [Adjusting Satin stitch spacing](#), [Adjusting Weave Fill stitch spacing](#) and [Adjusting Embossed Fill spacing](#) for details.

To delete stitches

- 1 In EasyEdit, click the **Stitch Mode** icon.
- 2 Select a stitch or stitches.
- 3 Press **Delete**.



Part VI

EMBROIDERY LETTERING

Create top-quality lettering quickly and simply. EasyDesign provides a large range of scalable closest-join alphabet styles and multi-color and fancy stitching alphabets to choose from.

Lettering essentials

This section describes how to add lettering, change formatting settings, set lettering orientation, and adjust lettering spacing. See [Lettering Essentials](#) for details.

Editing lettering

This section describes how to edit lettering objects as well as scale and transform them. It also describes how to adjust lettering orientations. See [Lettering Editing](#) for details.

Special lettering features

This section describes how to apply different stitch types to lettering objects. It covers converting TrueType fonts to embroidery as well as how to add special characters. Creating special effects with Lettering Art is discussed as well as the creation of monogram designs. It also covers adding special accents and borders to designs. See [Special Lettering Features](#) for details.

Chapter 22

LETTERING ESSENTIALS

Digitizer EX provides various techniques for adding lettering to designs quickly and easily using the built-in library of embroidery fonts or by converting any TrueType Font installed on your system. Apply formatting to lettering objects in the same way as a word processor, including italics.

Orientation determines the shape of lettering objects in a design. You can place lettering on a straight horizontal or vertical baseline, curve lettering around a circle or arc baseline, or digitize your own. Digitizer EX gives you interactive control over many baseline settings. Letter and line spacings can be determined before or after creating lettering objects and placing them in your design.

This section describes how to add lettering, change formatting settings, set lettering orientation, and adjust lettering spacing.

Adding lettering to embroidery designs

You can add lettering to a design by typing it directly in the design window, or entering it via the **Object Details** dialog.





Try this! The size of your lettering will determine the type of underlay you need to apply. Apart from stabilizing, underlay helps give 'loft' or to raise your lettering off the fabric. Lettering with heights under 5 mm should not have underlay. Letters 6 mm to 10 mm can have a center-run underlay applied. Lettering larger than 10 mm is large enough for edge-run underlay. See [Strengthening and stabilizing with underlays](#) for details.

Creating lettering on-screen



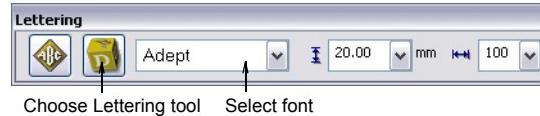
Use Lettering (Lettering toolbar) to add embroidery lettering to designs or edit selected lettering.

If it is not essential to fit letters precisely to a certain area, you can type them directly on-screen as with a word processor. Current lettering settings are used. You can change these before or after you digitize. You can also modify lettering objects directly on-screen to achieve various artistic effects. Digitizer EX provides a font range suitable for many applications.



To create lettering on-screen

- 1 Select a color from the Color Palette.
- 2 Click the Lettering icon and select a font from the Font list.



- 3 Adjust the lettering **Size** and **Width** settings as required.

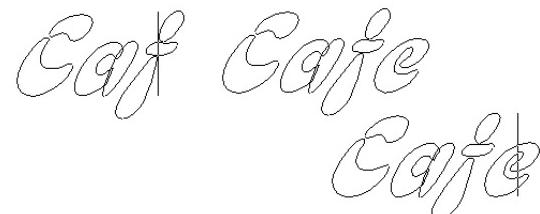


- 4 Select a slant setting as required. See [Making italic lettering](#) for details.
- 5 Select orientation settings. See [Setting lettering orientations](#) for details.
- 6 Click where you want to insert the text and start typing.



Try this! To start a new line, press **Shift + Enter**.

- 7 Press **Enter** to complete.



Note Appearance and layout depend on current settings in the **Object Details** dialog. Baselines determine the shape of lettering objects in a design. You can place lettering on a straight horizontal or vertical line, curve lettering around a circle or arc, or digitize your own baseline. See [Setting lettering orientations](#) for details.

Making italic lettering

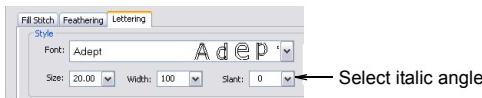
You can slant letters to the right for an italic effect. Enter the degree of slant in the **Angle** field of the **Lettering** tab. The default angle is 0°.



To make italic lettering

- 1 Double-click selected lettering object/s. The **Object Details > Fill Stitch** dialog opens.

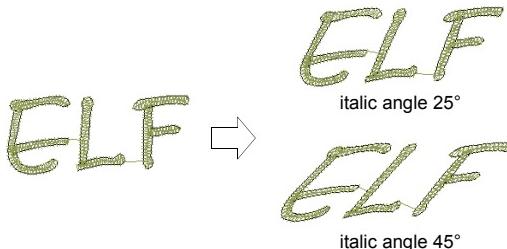
2 Select the Lettering tab.



3 Enter an angle in the Italic field.

The largest angle that the lettering can lean at is 45°. (0° is equivalent to no italics.)

4 Click OK.



Creating lettering with the Object Details dialog

 Click Lettering (Lettering toolbar) to add lettering directly on-screen.

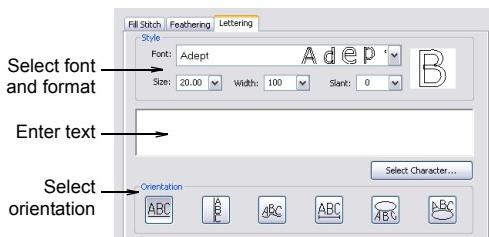
Using the **Object Details** dialog, you can specify letter formatting before adding it to the design. This is useful with more complex designs.



To create lettering with the Object Details dialog

1 Click the Lettering icon.

The **Object Details > Lettering** dialog opens.



2 Enter the text you want to embroider in the text entry panel.

To start a new line of lettering, press **Enter**.



Try this! You can insert a color change between two letters by keying a caret (^) symbol. Subsequent letters default to the next color in the palette.

3 Select a font from the Font list.

A sample character of the chosen alphabet appears in the preview window. For samples of the complete selection of standard alphabets, see [Packaged Fonts](#).



Try this! Consider letter size before you change alphabets. Some alphabets look best in a smaller size. Others can be stitched at a larger size. See also [Packaged Fonts](#).

4 Select formatting and orientation settings for the lettering. See [Setting lettering orientations](#) for details.

5 Click OK.

6 Click where you want to place the lettering, or mark reference points for the baseline you selected. See [Adjusting orientations](#) for details.

7 Press Enter.



Note Letters are filled with stitches according to current settings in the **Fill Stitch** tab of the **Object Details** dialog. You can change these at any time. See [Applying different stitch types to lettering objects](#) for details.

Setting lettering orientations

Orientation determines the shape of lettering objects in a design. You can place lettering on a straight horizontal or vertical baseline, curve lettering around a circle or arc baseline, or digitize your own. Different reference points are needed depending on the orientation you use. Baselines use default settings to determine their size, spacing and angles. Digitizer EX gives you interactive control over many baseline settings. Techniques are available to modify baseline type, length, radius and angle, as well as baseline position.



Selecting lettering orientation



Click Lettering (Digitize toolbar) to select orientation and adjust baseline settings.

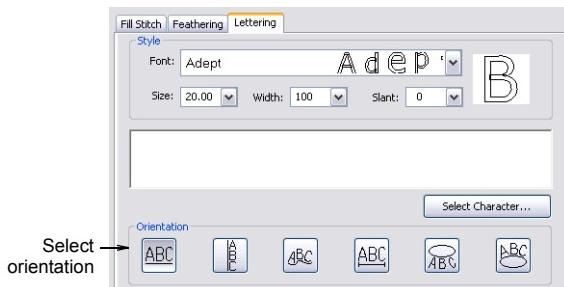
You can select different orientation through the **Object Details** dialog. You can also adjust baseline settings. You can apply orientation to new or selected objects.



Try this! Create identical baselines by duplicating or copying them in your design.

To select a lettering orientation

- 1 Double-click a selected lettering object.
- 2 The **Object Details** > **Fill Stitch** dialog opens.
- 3 Select **Lettering** tab.
- 4 In the Orientation panel, click an orientation icon.



The orientation you choose depends on the effect you want to achieve. You need to digitize different reference points depending on the type selected.

Options include:

- Horizontal: See [Creating horizontal orientations](#) for details.
- Vertical: See [Creating vertical orientations](#) for details.
- Any Shape: See [Creating custom orientations](#) for details.

- Circle CCW: See [Creating circular orientations](#) for details.
- Circle CW: See [Creating circular orientations](#) for details.



Note If you are using the Digitizer EX product level, another baseline option is available – Fixed Line. See [Creating fixed-length horizontal orientations](#) for details.



- 4 Click **OK**.

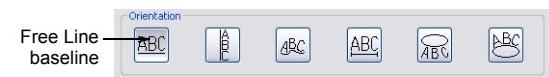
Creating horizontal orientations

Free Line baselines are straight, horizontal baselines. Free Line does not have a fixed or pre-determined length – the baseline extends as long as you keep adding letters.



To create a horizontal orientation

- 1 Create a new lettering object. See [Creating lettering with the Object Details dialog](#) for details.
- 2 Select **Free Line** as the orientation.



- 3 Click **OK** and click on-screen to establish the start-point of the baseline.



Free Line – click on-screen to mark start point

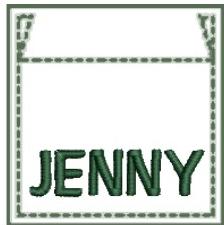


Try this! You can adjust orientation settings at any stage. See [Adjusting orientations](#) for details.

Creating fixed-length horizontal orientations

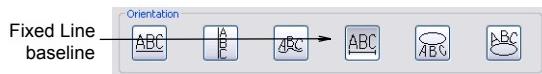
Both Free Line and Fixed Line baselines form straight, horizontal orientations. However, Fixed Line – available only in Digitizer EX – has a fixed length which you can digitize on-screen or specify numerically. If the text extends beyond the

baseline, lettering size and/or spacing is reduced according to the chosen reduction method.

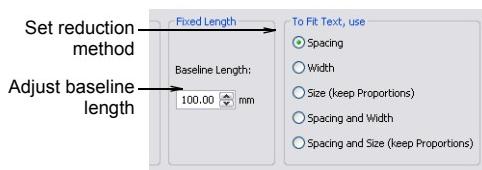


To create a fixed-length horizontal orientation

- 1 Create a new lettering object. See [Creating lettering with the Object Details dialog](#) for details.
- 2 Select **Fixed Line** as the orientation.



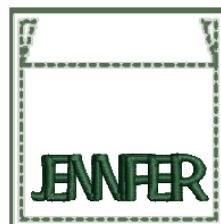
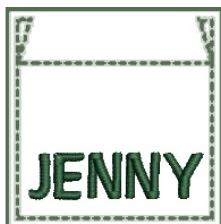
- 3 Adjust the baseline length in the **Fixed Length** field as required.



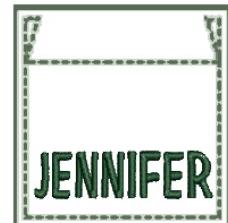
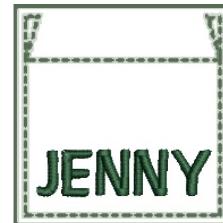
- 4 Select the reduction method you want to use in the **To Fit Text, use** panel.

With fixed-length orientation, lettering is 'reduced' to fit if the baseline is too short to accommodate all letters at their nominal width and default spacing. Various reduction methods are available:

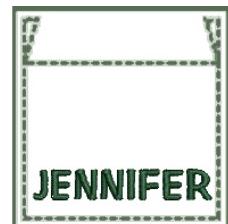
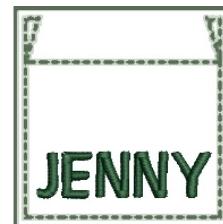
- **Spacing:** When selected, letters maintain their original height and width but reduced spacing if the baseline length requires it. Letters may even overlap to fit (negative spacing).



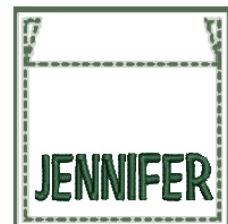
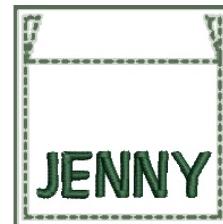
- **Width:** When selected, letters maintain their original height and spacing but reduced width if the baseline length requires it.



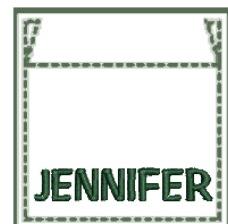
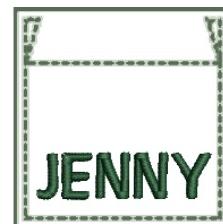
- **Size (keep Proportions):** When selected, letters maintain their original spacing and proportions but reduced size if the baseline length requires it.



- **Spacing and Width:** When selected, letters maintain their original height and proportions but width and spacing are reduced proportionately if the baseline length requires it.



- **Spacing and Size (keep Proportions):** When selected, letters maintain their original proportions but reduced size if the baseline length requires it.



Note With Fixed Line orientation, lettering is not increased if the baseline is longer than needed to fit the specified lettering.

- 5 Click **OK** and click on-screen to establish the start-point of the baseline.

- 6 Press **Enter** to accept the value in the **Fixed Length** field.

Alternatively, click on-screen to establish the end point. The **Fixed Length** value updates accordingly.



Try this! You can adjust settings at any stage. If you change baseline length by reshaping lettering or by changing the **Baseline Length** value, lettering reduction will be recalculated. The same applies if you change any lettering attribute which could affect its length, such as nominal width, nominal height or number of characters. See [Adjusting orientations](#) for details.

Creating vertical orientations

Vertical orientation does not have a fixed or pre-determined length – the baseline extends as long as you keep adding letters. Line spacing is calculated horizontally while letter spacing is calculated vertically. Letters, by default, are centered along vertical lines. New lines are placed by default from right to left to suit Asian languages. Vertical orientation is effective for embroidering on sleeves, as a decorative effect, and for Asian text.



Try this! Vertical lettering best suited to uppercase for Western languages because descenders in lowercase letters are not accommodated in the letter spacing. See [Adjusting individual letter spacing on-screen](#) for details.



To create a vertical orientation

- 1 In the **Object Details > Lettering** dialog, click the **Vertical** orientation icon.



- 2 Enter your text in the text entry box.
- 3 Click **OK**.
- 4 Mark the start point of the baseline on-screen.



Try this! You can adjust orientation settings at any stage. See [Adjusting orientations](#) for details.

Creating circular orientations

Use the **Circle CCW** or **Circle CW** orientation to place letters around a full circle.



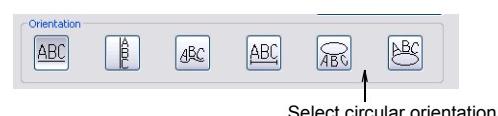
Circle Above

Circle Below

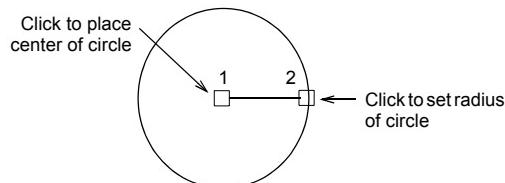
For a circle you need to mark two reference points, while for an oval you need to mark three. The position of the second reference point determines the justification point of the text. The text is centered around this point.

To create a circular orientation

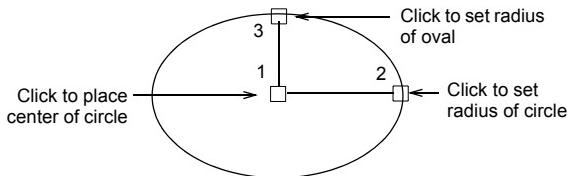
- 1 In the **Object Details > Lettering** dialog, click the **Circle CCW** or **Circle CW** orientation icon.



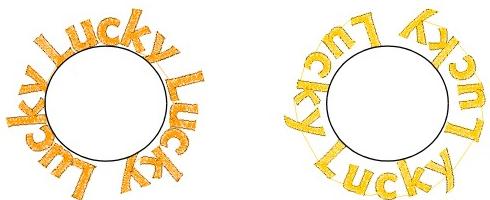
- 2 Enter your text in the text entry box.
- 3 Click **OK**.
- 4 Mark the center of the circle on-screen.
- 5 Mark a point on the circumference to define the radius.



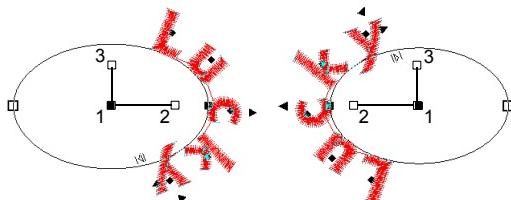
- 6 Press **Enter** for a perfect circle, or click again to form an oval.



As soon as the last point is marked, the letters of your text are positioned around the circle.



Note Orientation of the text around the oval depends on where you mark the reference points.



Try this! You can adjust orientation settings at any stage. See [Adjusting orientations](#) for details.

Creating custom orientations

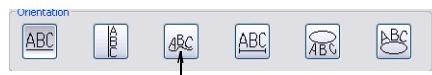
Use **Free Line** orientation to shape lettering around elements in your design. Digitize **Free Line** baselines by marking reference points to form the required line. The number of reference points and length of baseline are practically unlimited.



Try this! If the baseline has tight curves, or sharp corners, the letters may overlap. For best results, only mark curve points, and digitize lines which have shallow, gentle curves.

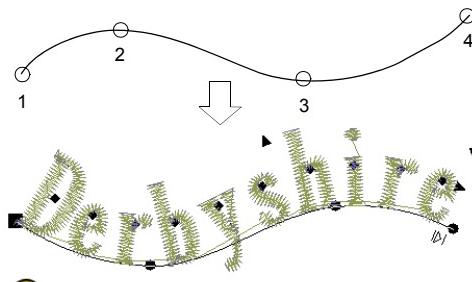
To create a custom orientation

- In the **Object Details > Lettering** dialog, click the **Any Shape** orientation icon.



Select Any Shape orientation

- Enter your text in the text entry box.
- Click **OK**.
- Mark the baseline reference points.
 - Mark curve points with the right mouse button.
 - Mark corner points with the left mouse button.
- Press **Enter** to complete.



Try this! You can adjust orientation settings at any stage. See [Adjusting orientations](#) for details.

Adjusting letter spacing

Letter and line spacings can be determined before or after creating lettering objects and placing them in your design. You can edit spacing using the **Reshape** tool.

Adjusting overall letter spacing on-screen



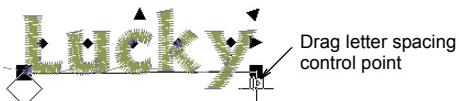
Click **Reshape** (Edit toolbar) to change letter spacing.

The spacing between letters is calculated automatically as a percentage of the letter height. In most cases the default spacing is adequate. Sometimes, however, you may want to change the overall letter spacing.

Lucky Lucky

To adjust overall letter spacing on-screen

- Select the lettering object.
- Click the **Reshape** icon.



- Drag the letter spacing control point left or right to adjust the spacing of all letters along the baseline.



- Release the mouse button to complete and press **Esc** to finish.



Adjusting individual letter spacing on-screen

 Use Reshape (Edit toolbar) to change individual letter spacing.
The spacing between letters is calculated automatically as a percentage of letter height. In most cases the default spacing is adequate. Sometimes, however, the spacing between certain letters may appear too large or too small, depending on the shape of neighboring letters. To compensate for this visual effect, you can move one or several selected letters closer or further apart along the baseline to improve spacing. See also [Transforming lettering with Select](#).

Bookcase
Book case

To adjust individual letter spacing on-screen

- Select the lettering object.

- Click the **Reshape** icon.
- Click the diamond control point in the middle of the letter.

Click diamond control point and hold down Ctrl as you select



Try this! To select multiple or a range of letters, hold down Ctrl or Shift as you select.

- Drag the letter/s along the baseline to adjust the spacing.



Try this! Alternatively, to move multiple letters, right-click the diamond control point of the first letter and drag. All letters to the end of the line move as one.



- Release the mouse button to complete and press **Esc** to finish.



Adjusting line spacing on-screen

 Use Reshape (Edit toolbar) to change line spacing.

Change the space between lines in a multiple-line lettering object using the **Reshape** tool.

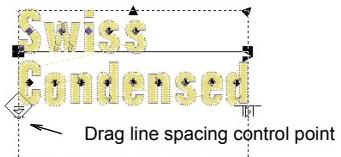
Swiss Condensed **Swiss Condensed**

To adjust line spacing on-screen

- Select the lettering object.
- Click the **Reshape** icon.
- Drag the line spacing control point up or down to change line spacing.

To adjust individual letter spacing on-screen

- Select the lettering object.



- 4 Release the mouse button to complete and press **Esc** to finish.

A screenshot of the Digitizer EX software interface, showing the same text "Swiss Condensed" in yellow font as the previous image. However, the callout annotation with the control point and its description is absent from this version.

Chapter 23

LETTERING EDITING

Digitizer EX gives you interactive and precise numeric control over many settings affecting lettering objects. You can adjust lettering objects as a group as well as the individual letters comprising a lettering object.

When you first create lettering, it may be too big or too small. Size can be adjusted both interactively and via settings. Apart from scaling, you can interactively Oskew and rotate lettering objects. Lettering orientation too can be adjusted on-screen after it has been placed in your design.

This section describes how to edit lettering objects as well as scale and transform them. It also describes how to adjust lettering orientations.

Editing lettering objects

When you have created a lettering object, you can select it and make changes to it directly on-screen or by adjusting object properties.



Editing lettering text on-screen



Click Lettering (Lettering toolbar) to edit lettering on-screen.

With EasyDesign you have the option of editing lettering directly on-screen.

To edit lettering text on-screen

- Select a lettering object and click the **Lettering** icon. An I-beam appears after the last letter of the object. You can move it using arrow keys.



- Edit the text as required.



Try this! Press **Shift + Enter** to start a new line.

- Press **Enter** to complete.

Editing lettering via the dialog

When you have created a lettering object, you can select and change it by adjusting object details.



To edit lettering via the dialog

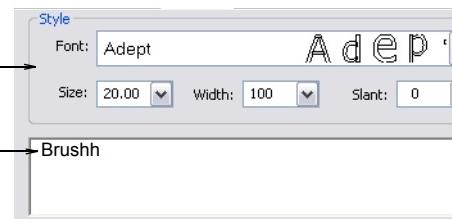
- Use one of the following techniques to select lettering objects:
 - Select a single lettering object: Click the lettering object with the left mouse button. The object changes color and 8 sizing handles appear around it.



- Select a group of lettering objects: Select a lettering object then, holding down the **Ctrl** key, click other objects as required.
 - Select lettering objects with a bounding box: Click and drag a bounding box around the lettering object/s and release the mouse.
- Double-click the selected lettering object/s.

The **Object Details > Fill Stitch** dialog opens.

- Select the **Lettering** tab.



- Edit the text in the text entry panel as required.
- Make any other adjustments you require. See also [Setting lettering orientations](#).
- If you want to save settings to the template, click **Save**.
- Click **OK**.



Note Letters are filled with stitches according to current settings in the **Fill Stitch** tab of the **Object Details** dialog. You can change these at any time. See [Applying different stitch types to lettering objects](#) for details.

Scaling lettering

When you first create lettering, it may be too big or too small. Size can be adjusted in three ways:

- by scaling on-screen with the **Select Object** or **Reshape** tools.
- by adjusting size and height settings in the **Object Details > Lettering** dialog.
- by adjusting width and height settings in the **Object Details > Dimensions** dialog.

Scaling lettering with Select



Use **Select** (Edit toolbar) to scale lettering objects on-screen.

You can scale your lettering objects vertically, horizontally and proportionally with the **Select** tool. See also [Transforming lettering with Select](#).

Liberty Liberty

To scale lettering with Select

- 1 Click the **Select** icon and select the lettering object.



- 2 Click and drag one of the square control points to resize the object horizontally, vertically or proportionally.

A shadow outline shows the new size of the lettering object as you drag.



- 3 Release the mouse to complete.



Scaling lettering with Reshape



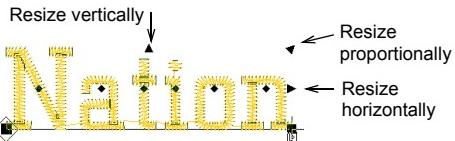
Use Reshape (Edit toolbar) to scale lettering objects on-screen.

You can scale your lettering objects vertically, horizontally and proportionally with the **Reshape** tool. See also [Rotating lettering with Reshape](#).

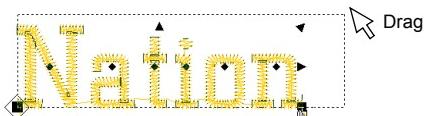


To scale lettering with Reshape

- 1 Select the lettering object.
- 2 Click the **Reshape** icon.



- 3 Click and drag one of the dark triangular control points to resize the object horizontally, vertically or proportionally.



A bounding box shows the new size of the lettering object as you drag.

- 4 Release the mouse.



Scaling lettering via the Lettering tab

You can scale your lettering objects vertically, horizontally and proportionally via the **Lettering** tab of the **Object Details** dialog.



Try this! Change the appearance of an alphabet by changing the letter width in proportion to the height. The original width value is 100%.

To scale lettering via the Lettering tab

- 1 Double-click selected lettering object/s. The **Object Details > Fill Stitch** dialog opens.
- 2 Select the **Lettering** tab.



- 3 Enter the size of your lettering object in the **Size** field.

Kudos Kudos

Size 10 mm

Size 20 mm

- 4 Enter the width of your lettering object in the **Width** field as a percentage of the height.
 - For wide letters, increase the percentage – e.g. 140%.
 - For narrow letters, decrease the percentage – e.g. 70%.
- 5 Click **OK**.

Kudos

Width 100%

Kudos

Width 70%

Kudos

Width 150%

Scaling lettering via the Dimensions tab

You can scale your lettering objects vertically, horizontally and proportionally via the **Lettering** tab of the **Object Details** dialog.



Try this! Change the appearance of an alphabet by changing the letter width in proportion to the height. The original width value is 100%.

To scale lettering via the Dimensions tab

- 1 Double-click selected lettering object/s. The **Object Details > Fill Stitch** dialog opens.
 - 2 Select the **Dimensions** tab.
- Adjust width and height settings

Width:	<input type="text" value="76.21"/> mm	<input type="button" value="100 %"/>
Height:	<input type="text" value="79.00"/> mm	<input type="button" value="100 %"/>
- 3 Adjust the width and height settings either as absolute values (mm) or as a percentage of the current settings.

Kudos Kudos

original

Width 150%

Kudos Kudos

Height 150%

Width and Height 150%

- 4 Click **OK**.

Transforming lettering objects

Apart from scaling, you can use the **Select** and **Reshape** tools to skew and rotate lettering objects. See also [Scaling lettering](#).

Transforming lettering with Select



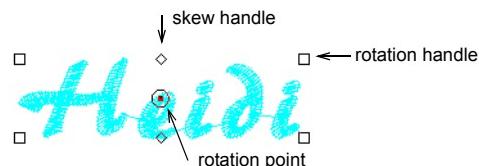
Use **Select** (Edit toolbar) to transform lettering objects on-screen.

You can transform lettering objects by manipulating control points on-screen with the **Select** tool. See also [Scaling lettering with Select](#).

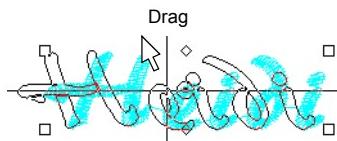
Heidi Heidi Heidi

To transform lettering with Select

- 1 Click the **Select** icon and select the lettering object. The resizing control points appear. See also [Scaling lettering with Select](#).
- 2 Click the lettering object again. Another set of control points appear. These let you rotate and skew the lettering object.

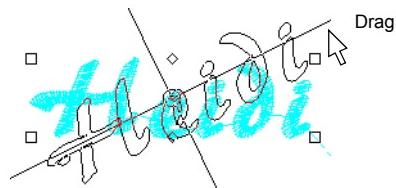


- 3 Click and drag one of the diamond-shaped control points to skew the lettering object horizontally.



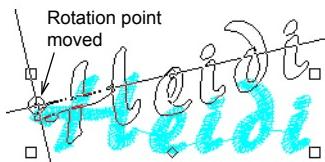
A shadow outline shows the skewed lettering object as you drag.

- 4 Click and drag one of the hollow square control points to rotate the lettering object.



A shadow outline shows the rotated lettering object as you drag.

- 5 Click and drag the rotation point itself to a new position before rotating.



- 6 Press **Esc** to complete.

Rotating lettering with Reshape



Use Reshape (Edit toolbar) to rotate lettering objects on-screen.

You can rotate lettering objects by manipulating control points on-screen with the **Reshape** tool. See also [Scaling lettering with Select](#).

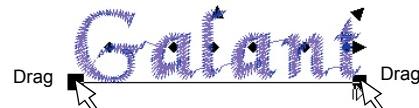


To rotate lettering with Reshape

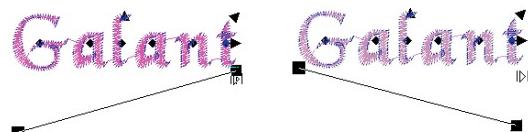
- 1 Select the lettering object.

- 2 Click the **Reshape** icon.

Control points appear around the lettering object.

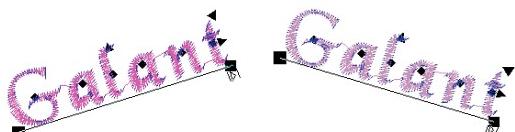


- 3 Click and drag one of the solid square control points on the baseline to rotate the lettering object.



A baseline shows the rotated position of the lettering object as you drag.

- 4 Release the mouse.



- 5 Press **Esc** to complete.

Adjusting individual letters

As well as [scaling](#) and rotating lettering objects, the **Reshape** tool is used to manipulate individual letters. You can reposition letters in relation to each other, scale, rotate and skew them, as well as reshape them. You can also recolor letters individually.

Reshaping letters on-screen



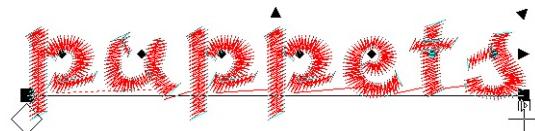
Use Reshape (Edit toolbar) to transform individual letters on-screen.

Create special lettering effects by reshaping letter outlines with the **Reshape** tool.

**To reshape letters on-screen**

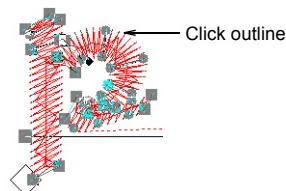
- 1 Select the lettering object.
- 2 Click the **Reshape** icon.

Control points appear around the lettering object.

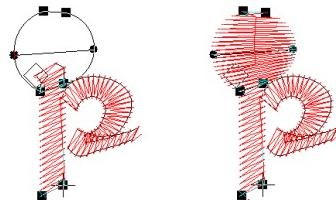


- 3 Click the letter outline.

Additional control points appear around the outline.



- 4 Reshape the letter by dragging the control points. See [Reshaping objects](#) for details.



- 5 Press **Esc** to complete.

**Recoloring letters on-screen**

Use **Select** (Edit toolbar) to select lettering objects on-screen.



Use Lettering (Lettering toolbar) to recolor letters on-screen.

EasyDesign lets you change the color of individual letters within a lettering object. See also [Inserting manual color changes](#).



Try this! You can also insert a color change between two letters by keying a caret (^) symbol. Subsequent letters default to the next color in the palette. See [Creating lettering with the Object Details dialog](#) for details.

To recolor letters on-screen

- 1 Click the lettering with the **Select** tool selected.



- 2 Click the **Lettering** icon then click within the lettering object.
- 3 Select a letter (or letters) by dragging the cursor over the letter.



- 4 Click a color on the color chart.
- 5 Press **Enter**.

- Repeat to recolor other letters.

Adjusting orientations

Lettering orientation can be adjusted on-screen after it has been placed in your design by means of the **Reshape** tool.

Reshaping horizontal orientations



Use Reshape (Edit toolbar) to reshape lettering orientations.

Reshape straight orientations to place them on an angle. See also [Setting lettering orientations](#).

To reshape a horizontal orientation

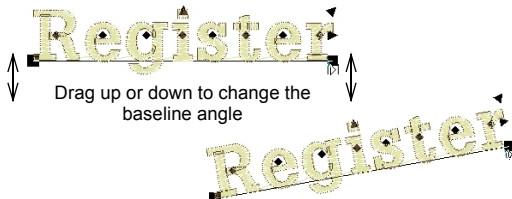
- Select the lettering object.
- Click the **Reshape** icon to display control points.



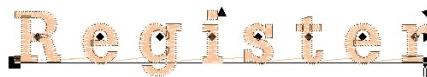
Try this! The large diamond and cross represent stitching start and end points. You may need to move them to access baseline control points. They will reposition themselves in the new entry and exit points based on the changes you make to the baseline.



- To change the angle, click and drag one of the large solid squares.



- To change the letter spacing click and drag the open triangle control point.



Note With Fixed Line orientation, lettering is not increased if the baseline is longer than needed to fit the specified lettering. See [Creating fixed-length horizontal orientations](#) for details.

- Press **Esc** to complete.

Reshaping circular orientations



Use Reshape (Edit toolbar) to reshape lettering orientations.

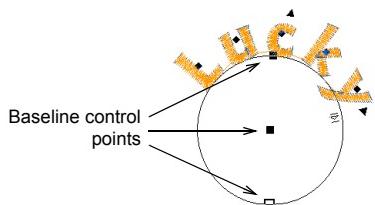
Reshape **Circle CCW** and **Circle CW** orientations to change curve depth, justification point and baseline length. See also [Setting lettering orientations](#).

To reshape a circular orientation

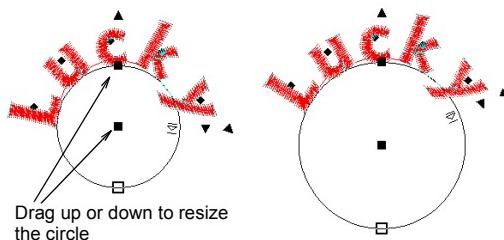
- Select the lettering object.
- Click the **Reshape** icon to display control points.



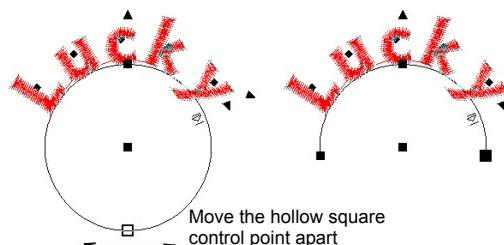
Try this! The large diamond and cross represent stitching start and end points. You may need to move them to access baseline control points. They will reposition themselves in the new entry and exit points based on the changes you make to the baseline.



- To resize the circle drag up or down either the control point on the circumference of the circle or in the center.



- 4 Create an arc baseline from a circular one by dragging the hollow square control point apart.



- 5 Press **Esc** to complete.

Reshaping custom orientations



Use Reshape (Edit toolbar) to reshape lettering orientations.

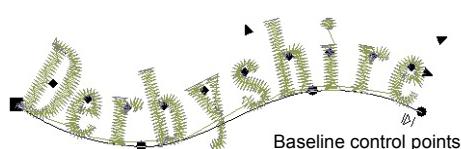
Reshape Any Shape orientations by moving, changing, adding or deleting control points along the baseline. See also [Setting lettering orientations](#).

To reshape a custom orientation

- Select the lettering object.
- Click the **Reshape** icon to display control points.



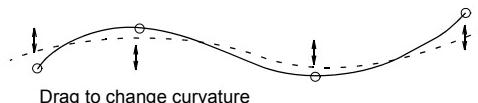
Try this! The large diamond and cross represent stitching start and end points. You may need to move them to access baseline control points. They will reposition themselves in the new entry and exit points based on the changes you make to the baseline.



- To adjust the baseline add, delete, change or move reference points like any embroidery object. See [Reshaping objects](#) for details.
- To reshape the baseline, click the point on the baseline where you want it to bend (change direction).
 - Left-click to bend the line at an angle.
 - Right-click to bend the line into a curve.



- To re-position the baseline, drag any one of the baseline control points up or down.



- Press **Esc** to complete.

Changing letter sequencing

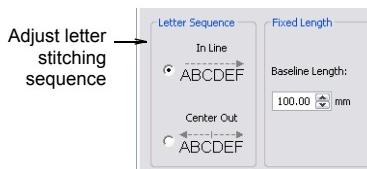


Click Lettering (Lettering toolbar) to change letter sequencing.

With the Digitizer EX product level, you can specify the sequence in which letters are stitched to minimize registration problems with caps or difficult fabrics. Stitch the lettering from left to right (the default setting) or from center out. This is especially useful when stitching on caps. See also [Creating fixed-length horizontal orientations](#).

To change letter sequencing

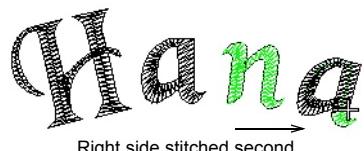
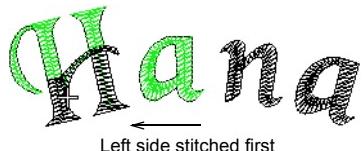
- Right-click the **Lettering** icon.
The **Object Properties > Lettering** dialog opens.



- 2 Select a letter stitching sequence in the **Letter Sequence** panel. Options include:
- **In Line:** When selected, lettering is stitched from left to right (the default).



- **Center Out:** When selected, letters to the left of center are stitched first, going from right to left. Next letters to the right of center are stitched, going from left to right.



- 3 Click **OK**.



Try this! Travel through your design to check the stitching sequence. See [Redrawing the stitching sequence slowly](#) for details.

Chapter 24

SPECIAL LETTERING FEATURES

Like all embroidery objects, each lettering object has its own properties. Before you create a lettering object, you may want to adjust the settings for the stitch type you are going to use. Alternatively you may want to change the stitch settings and effects applying to existing objects.

In addition to its built-in library of embroidery alphabets, Digitizer EX allows for the conversion of any TrueType font installed on your system to an embroidery alphabet. The result is similar to embroidery alphabets although the quality may not be quite as high.

Embroidery and TrueType fonts generally contain many more characters than are available via your keyboard. Use the Windows Character Map to provide quick access to special characters and symbols. Apply Lettering Art effects to lettering objects to make them bulge or arch, stretch or compress. Create monogram designs using special monogramming fonts. These alphabets provide three sets of the upper-case alpha characters. Add decorative borders such as rectangles, ovals, shields, as well as ornamental decorations or 'accents'.

This section describes how to apply different stitch types to lettering objects. It covers converting TrueType fonts to embroidery as well as how to add special characters. Creating special effects with Lettering Art is discussed as well as the creation of monogram designs. It also covers adding special accents and borders to designs.



Applying different stitch types to lettering objects

By default, lettering objects are filled with **Satin Fill**. You can also apply other basic fill stitch types, such as **Weave Fill**, as with other embroidery objects. See [Selecting fill stitches](#) for details.

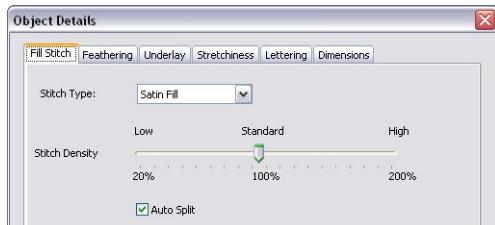
Adjusting Satin Fill settings for lettering objects

By default, lettering objects are filled with **Satin Fill**. Where a letter is narrow, stitches are tight, thus requiring fewer stitches to cover the fabric. Where a column is very narrow, stitches need to be less dense because too many needle penetrations can damage the fabric. See also [Creating Satin fills](#).

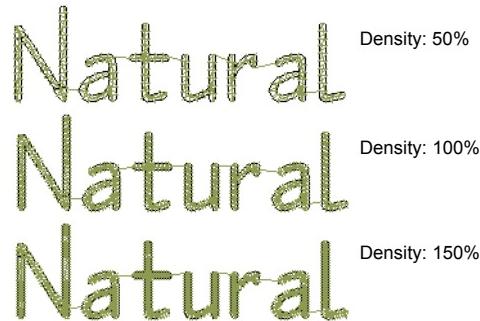


To adjust Satin Fill settings for lettering objects

- Double-click a selected lettering object.
The **Object Details > Fill Stitch** dialog opens.



- Move the slider to set the stitch density you want for your lettering.
- Click **OK**.



Try this! Add extra texture to lettering by applying **Feather Edge**. See [Applying Feather Edge](#) for details.



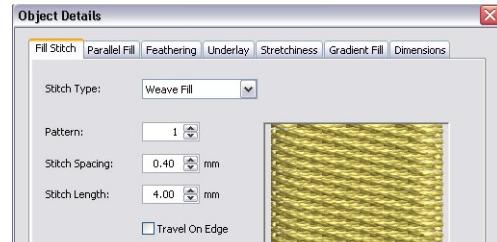
Adjusting Weave Fill settings for lettering objects

You can fill lettering shapes with Weave Fill stitching. It is suitable for filling large, irregular lettering shapes. See also [Creating Weave fills](#).

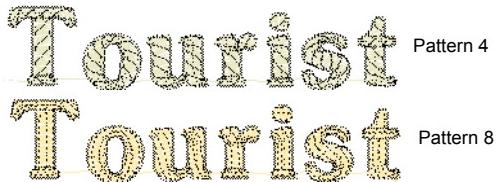


To adjust Weave Fill settings for lettering objects

- Double-click a selected lettering object.
The **Object Details > Fill Stitch** dialog opens.



- Select **Weave Fill**.
- Select a **Weave Fill Pattern**. See [Selecting Weave Fill patterns](#) for details.



- 4 Adjust stitch spacing to increase or decrease density. See [Adjusting Weave Fill stitch spacing](#) for details.



- 5 Adjust stitch length to increase or decrease needle penetrations. See [Adjusting Weave Fill stitch length](#) for details.
- 6 Click **OK**.

Converting TrueType fonts to embroidery

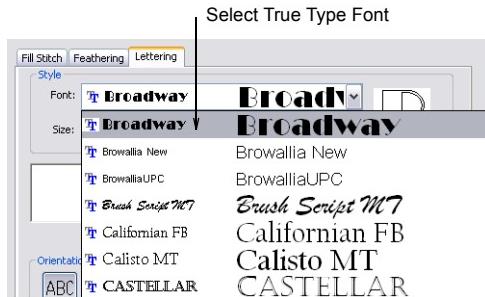


Click Lettering (Lettering toolbar) to add lettering directly on-screen.

The TrueType font conversion feature lets you convert any TrueType font installed on your system to an embroidery alphabet. The process is fully automatic. The result is similar to embroidery alphabets although the quality may not be quite as high. The quality greatly depends on the original shapes, narrower serif type alphabets producing better results than blocked alphabets.

To convert TrueType fonts to embroidery

- 1 Click the **Lettering** icon.
The **Object Details > Lettering** dialog opens.



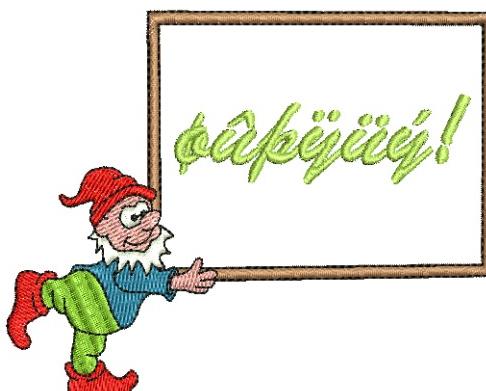
- 2 Select a TrueType font from the **Font** list.
3 Enter the text you want to embroider in the text entry panel.
Alternatively, type it directly on-screen after adjusting the conversion settings.



Note Depending on the TrueType font, complex Chinese (Kanji) characters with many strokes may not convert correctly into stitch data. When this happens, try selecting another available TrueType font or change the letter orientation and then try converting again.

Adding special characters

Embroidery and TrueType fonts generally contain many more characters than are available via your keyboard. In Digitizer EX, you can add special characters and symbols directly through the **Select Character** dialog or by means of the MS Windows® Character Map.



Selecting special characters



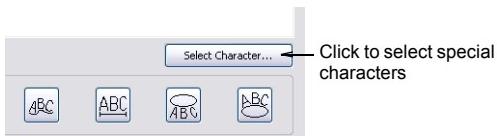
Click Lettering (Lettering toolbar) to add lettering directly on-screen.

You can quickly add special characters and symbols to your lettering designs. If you know the keyboard shortcut for a symbol, add it to your lettering by entering the combination on-screen or in the **Object Properties > Lettering** dialog.



To select special characters

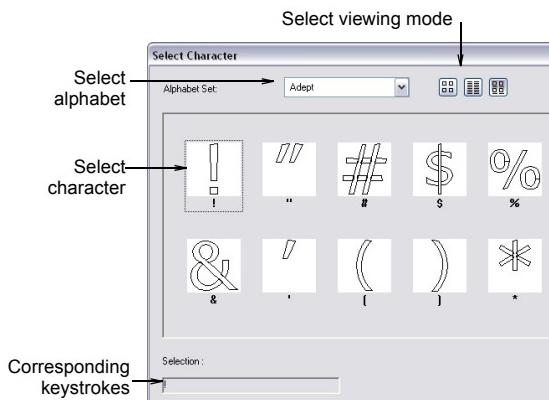
- 1 Right-click the Lettering icon.
The Object Properties > Lettering dialog opens.



Try this! If you know the **Alt** key code for the special character you require, you can key it directly into the text entry field. The Character Map gives you codes for all characters. See [Using the Character Map](#) for details.

- 2 Click Select Character.

The Select Character dialog opens.



Try this! Select a viewing mode – you can list alphabets by picture, character, or both.

- 3 Select an alphabet from the Alphabet Set list.
- 4 Select the character(s) you want to use.



Try this! When you select a character, a keystroke appears in the **Selection** field. This indicates the key combination required to type the character directly on-screen. For example, 'm' means press the **m** key while 'M' means press **Shift + M**.

- 5 Click **OK** to close the dialog.
The selected characters are displayed in the text entry panel.
- 6 Click **OK**.

Using the Character Map

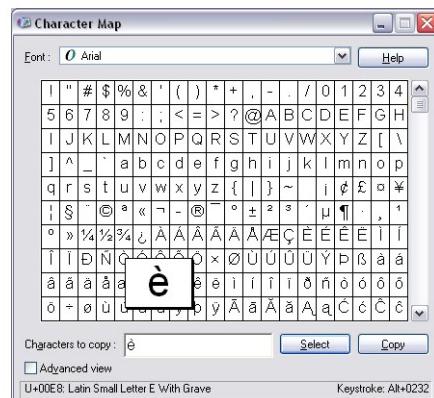
Use the MS Windows® Character Map to provide quick access to common symbols and letters. The Character Map is usually installed as part of the MS Windows® setup. See your MS Windows® documentation for more details.



Try this! You can create special characters in each alphabet by holding down the **Alt** key on your keyboard and typing **0** (zero), its code, using the numbers on the keypad. For example, to type è with the code **232**, type **Alt + 0232**. The character will appear when you release the **Alt** key. The Character Map gives you codes for all characters.

To use the Character Map

- 1 Open the MS Windows® Character Map.
By default, you will find it under **Start > Programs > Accessories > System Tools > Character Map**.



- 2 Double-click a character, or select it and press **Select**.

The character appears in the **Characters to copy** box.



Note The equivalent **Alt** key combination is shown at the bottom of the dialog. This can be used to key the character directly on screen.

- 3 Click **Copy** to copy the character to the clipboard.
- 4 Paste it into the text entry panel by pressing **Ctrl + V**.



- 5 Click **OK**.
Continue creating the lettering object in the normal way.

Creating special effects with Lettering Art

Use Lettering Art (Lettering toolbar) to distort lettering.

Apply **Lettering Art** effects to lettering objects to make them bulge or arch, stretch or compress.



Distorting lettering objects

Three types of **Lettering Art** effect are available – **Straight**, **Curved** or **Diamond**.

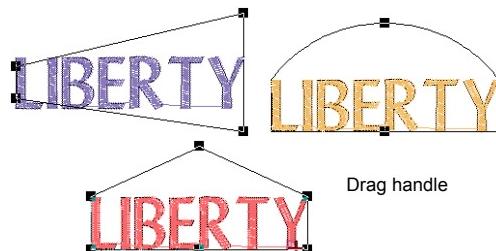


Try this! Lettering Art is typically applied to lettering objects, but they can also be applied to other types of embroidery object.

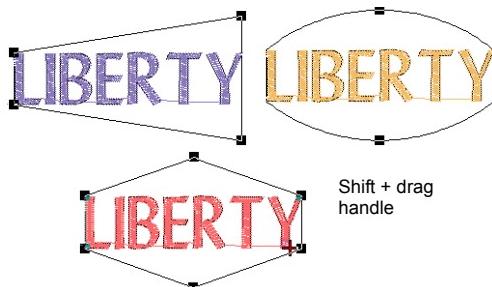
To distort lettering objects

- 1 Select the lettering object.
- 2 Click **Lettering Art** button.
- 3 Select a type: **Straight**, **Curved** or **Diamond**.
Different handles display around the object outline depending on the type.

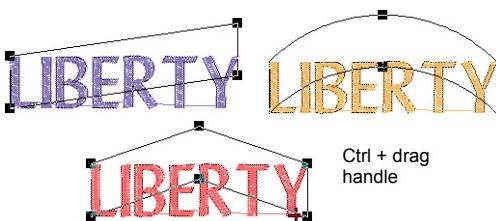
- 4 Drag one or more handles up or down to distort the object.



- To move two handles in opposite directions, hold the **Shift** key down while dragging a handle.



- To move the handles in the same direction, hold down the **Ctrl** key while dragging a handle.



- 5 Press **Esc** to complete.



Try this! To adjust the control points, select the lettering object and press **H**.

Editing lettering in Lettering Art

You can edit lettering in Lettering Art in the **Object Details > Lettering** dialog.



To edit lettering in Lettering Art

- 1 Double-click the lettering object.
The **Object Details > Fill Stitch** dialog opens.
- 2 Select the **Lettering** tab.
- 3 Edit the text as required.

LIBERTY LIBERTY

- 4 Press **OK**.
The lettering is updated.

**Removing Lettering Art**

Use Lettering Art > None (Lettering toolbar) to return an object to its original shape.

Return an object to its original shape by removing the Lettering Art.

**To remove Lettering Art**

- Select the lettering object.
- Select **Lettering Art > None**.

The Lettering Art is removed and the letters return to their original shape.

Creating monogram designs

Digitizer EX lets you create monogram designs using special monogramming fonts. These alphabets provide three sets of the upper-case alpha characters. You can also add decorative borders such as rectangles, ovals, and shields to monograms. See [Adding borders](#) for details.

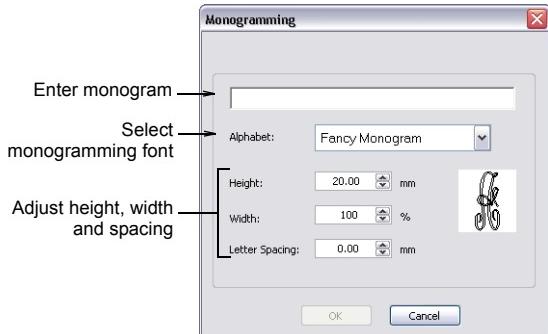
**Adding monogram lettering**

Click Monogramming (Lettering toolbar) to add monograms directly on-screen.

Monogramming fonts provide three sets of the upper-case alpha characters. The first, known as the 'left set', is designed to appear on the left side of a monogram. The second, or 'middle set', is designed for the middle position(s). And then there is a 'right set'. Each set is mapped to a specific set of character equivalents in the alphabet. See [Monogram font mappings](#) for details.

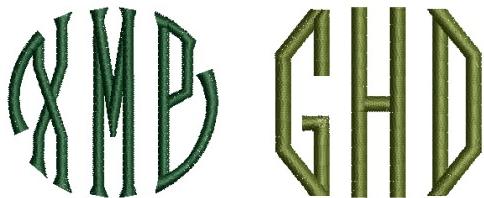
**To add monogram lettering**

- 1 Click the **Monogramming** icon.
The **Monogramming** dialog opens.
- 2 Click the **Monogramming** icon.
The **Monogramming** dialog opens.



- 3 Select the desired monogramming font.
- 4 Key in the letters comprising the monogram – it doesn't matter whether you enter characters in upper or lower case. Any non-alpha characters are ignored.
- 5 Adjust letter height, width and spacing in the fields provided.
- 6 Click **OK**.

A lettering object is created using the settings entered. The left-most letter is replaced by its equivalent left character – e.g. F is replaced by 'Left F'. Similarly, the right-most letter is replaced by its equivalent right character – e.g. F is replaced by 'Right F'. All other letters are left unchanged.



Try this! Add decorative borders such as rectangles, ovals, and shields to monograms using the **Insert Border** tool. Borders are automatically sized to fit the current design. See [Adding borders](#) for details.

Adding monogram accents

Use **Insert Design** (Embroidery menu) to add ornamental decorations to designs.

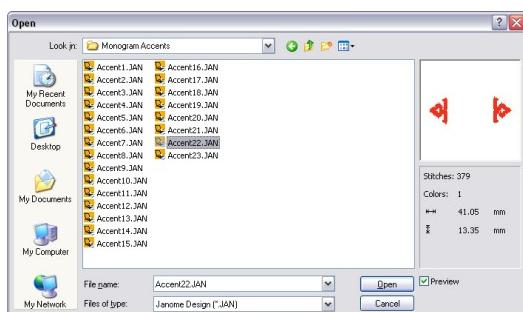
Add ornamental decorations to designs in the same way as you insert embroidery designs. Adjust the position and size as required. See also [Inserting designs](#).



To add a monogram accent

- 1 Open or create a monogram design.
- 2 Travel to the point in the stitching sequence where you want to insert the ornament – usually the end. See [Traveling through the stitching sequence in EasyDesign](#) for details.
- 3 Select **Embroidery > Insert Design**.

The **Open** dialog opens at the previously opened folder.



- 4 From the **Look In** dropdown list, browse to the **C:\Embroidery Album\Monogram Accents** folder.
- 5 Select the ornament to insert and click **Open**. The design is inserted at the current needle position.
- 6 Move the ornament into the required position. See [Positioning objects using click and drag](#) for details.
- 7 Adjust size and position as required. See [Reshaping objects](#) for details.

Editing monograms

You can't take a monogram object back to the **Monogramming** dialog to make changes. But you can edit it like a normal lettering object by adjusting the object details. However, when the object is selected, you will see the real characters used to make the lettering object – e.g. instead of 'Left F', you will see ampersand (&) as per the

table. Use the table to edit the characters in the dialog. See [Monogram font mappings](#) for details.

To edit a monogram

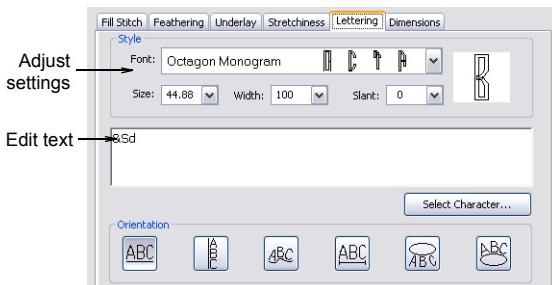
- Select the monogramming object.



- Double-click the object. Alternatively right-click it and select **Object Details** from the popup menu.

The **Object Details > Fill Stitch** dialog opens.

- Select the **Lettering** tab.



- Edit the text in the text entry panel as required.
- Make any other adjustments you require. See also [Setting lettering orientations](#).
- Click **OK**.



Note Letters are filled with stitches according to current settings in the **Fill Stitch** tab of the **Object Details** dialog. You can change these at any time. See [Applying different stitch types to lettering objects](#) for details.



Try this! Digitizer EX lets you insert a color change on any desired stitch in EasyDesign. This is particularly useful when working with monograms or other lettering objects. See [Inserting manual color changes](#) for details.

Monogram font mappings

Digitizer EX contains four monogramming fonts – Fancy, Octagon, Point and Seal. Monogramming fonts provide three sets of the upper-case alpha characters. The first, known as the 'left set', is designed to appear on the left side of a monogram. The second, or 'middle set', is designed for the middle position(s) of a monogram. The 'right set' is designed to appear on the right side of a monogram. Each set is mapped to a specific set of character equivalents in the alphabet. See also [Editing monograms](#).

Letter	Left	Middle	Right
A	!	A	a
B	"	B	b
C	#	C	c
D	\$	D	d
E	%	E	e
F	&	F	f
G	'	G	g
H	(H	h
I)	I	i
J	*	J	j
K	+	K	k
L	,	L	l

Letter	Left	Middle	Right
M	-	M	m
N	.	N	n
O	/	O	o
P	0	P	p
Q	1	Q	q
R	2	R	r
S	3	S	s
T	4	T	t
U	5	U	u
V	6	V	v
W	7	W	w
X	8	X	x
Y	9	Y	y
Z	:	Z	z

Adding borders



Use Insert Border (Lettering toolbar) to add attractive borders to selected lettering objects.

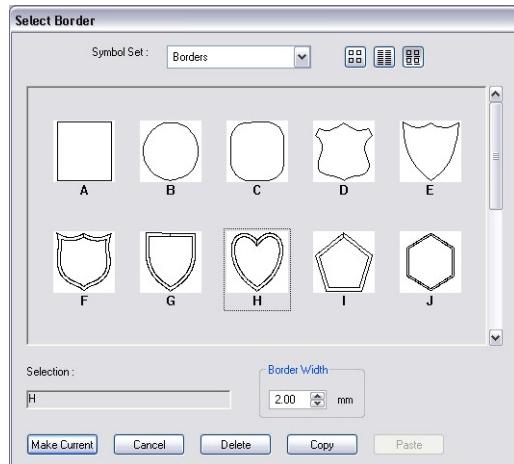
Add decorative borders such as rectangles, ovals, and shields to monograms and designs using the **Insert Border** tool. Borders are automatically sized to fit the current design. Adjust border thickness and size as required.



To add a border

- Select a lettering object.

- Click the **Insert Border** icon.
The **Select Border** dialog opens.



- Select a border and adjust the **Border Width** setting as required.
The default **Border Width** can be adjusted after insertion in the design.
- Click **Make Current**.
The **Select Border** dialog closes and the border is generated to include all design elements in the design window.
- Adjust border thickness and size as required. See [Reshaping objects](#) for details.

Part VII

DESIGN PROCESSING

You can output embroidery designs in a variety of ways – saving to disk or sending directly to machine for stitching. Designers frequently want to distribute their designs so that they can be seen in real colors, in Vizualizer or otherwise. In EasyDesign you can save both design images and production worksheets to disk or email them.

Printing designs

This section describes how to preview printouts, set print options, print embroidery elements, appliqué patterns, as well as color layers. See [Printing Designs](#) for details.

Reading and writing design files

This section describes embroidery stitch and outline design formats, as well as how to open embroidery files in Digitizer EX. It also describes saving designs for machine as well as sending and receiving designs by direct connection. Writing designs to Flash Memory reader/writer is also covered. See [Reading and Writing Design Files](#) for details.

Chapter 25

PRINTING DESIGNS

You can create a hard copy of your designs using default or custom printer options. Preview designs before printing. Set print options to display the exact information you require. There are options to include or exclude start/end point crosshairs, connectors, background color/fabric as well as the current hoop. Print a copy of the appliquéd pattern to use to cut out the fabric pieces. A Color Layers option allows you to include a list of color layers together with color and stitch information for each layer. If you are using a color printer, you can print in Vizualizer mode. See also [Printing designs and catalogs](#).

This section describes how to preview printouts, set print options, print embroidery elements, appliquéd patterns, as well as color layers.

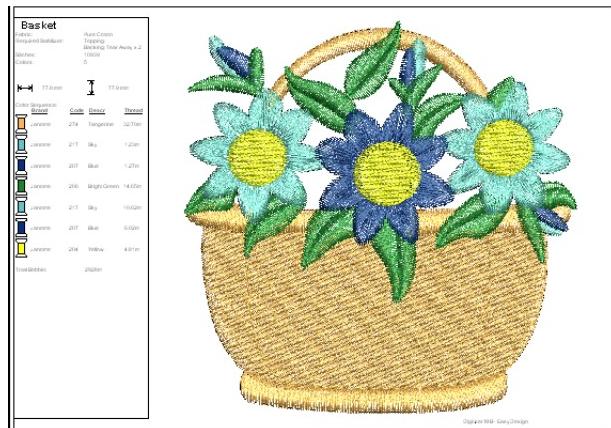
Previewing printouts



Use Print Preview (Standard toolbar) to preview a design printout.



Use Print (Standard toolbar) to print a design using the current settings.

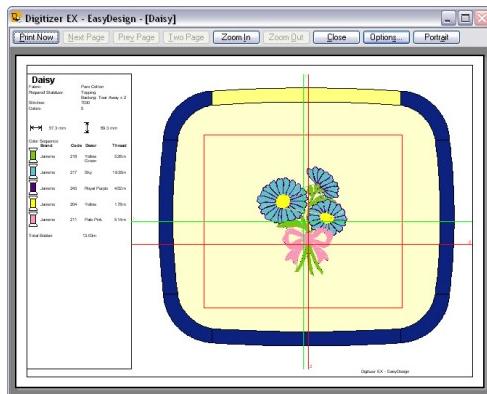


Use **Print Preview** to view stitching information. Use it to check the sewing sequence before you stitch out your design. You can create a hard copy of your designs using default or custom printer options.

To preview a printout

- Click the **Print Preview** icon.

Your design displays as it will be printed. Large designs may be displayed over a number of pages if printed at actual size.



- Use the **Preview** buttons as required:

- Next Page:** View the next page.
- Prev Page:** View the previous page.
- Two Page:** Display two pages in the Preview Window.
- Portrait/Landscape:** Toggle design display between landscape and portrait views.
- Zoom In/Out:** Use to examine portions of the design or to read production information.

- Click **Options** to set any **Print Options**. See [Setting print options](#) for details.

- Click **Print Now** to proceed with printing.

The MS Windows® **Print** dialog opens allowing you to choose a printer and adjust any other print settings you require. See also [Setting print options](#).

- Click **Close** to return to the Design Window.

Setting print options

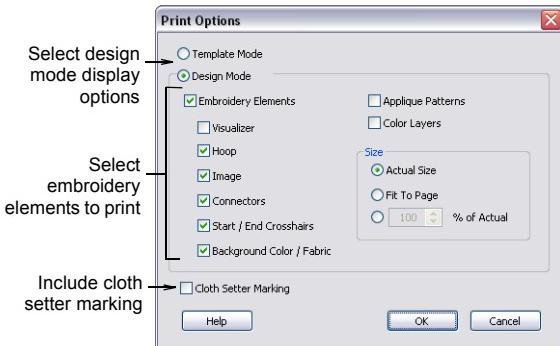
Print options give you precise control over your design printout. You can include templates or designs in the printout, embroidery elements, and cloth setter marking. You can include a copy of the appliqué pattern as well as a list of color layers in the current design. Design information includes author, estimated length of upper thread per color and total bobbin usage.

To set print options

- To access the Print Options dialog, either select File > Print or File > Print Preview.

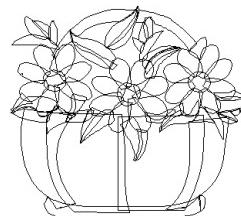
- Click **Options**.

The **Print Options** dialog opens.



- Select **Template** or **Design** mode option.

- Template Mode:** shows an outline of the design with no stitches.



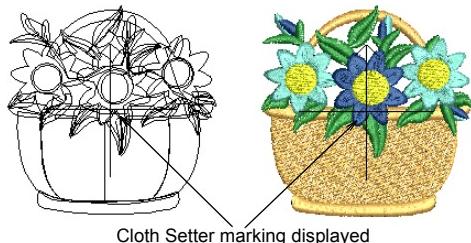
- Design Mode:** shows the design as it appears in the Design Window. When you choose this mode, further choices become available to you.

- Select **Embroidery Elements** if you want to include them in the printout. See [Printing embroidery elements](#) for details.

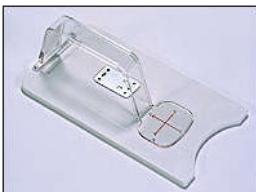
- Include a copy of the appliqué pattern to use to cut out the fabric pieces, as required. See [Printing appliqué patterns](#) for details.

- Include a list of color layers in the current design, together with color and stitch information for each layer, as required. See [Printing color layers](#) for details.

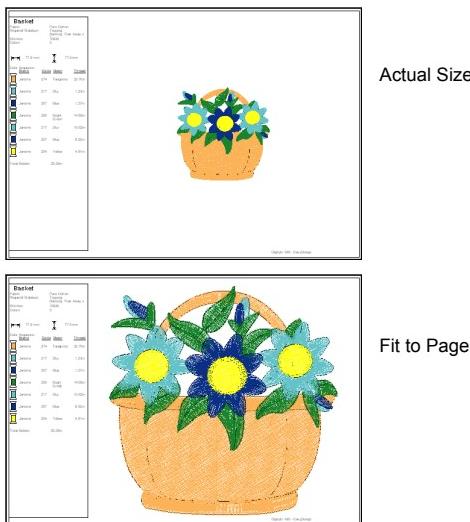
- Include a **Cloth Setter Marking** as required. The option is available in both Template and Design modes. In the latter case, it is only available with **Embroidery Elements** and **Actual Size** selected.



The cloth setter marking is displayed at the center of a design with an arrow and is supported in JAN, JEF and SEW files. The marking is intended for use with a Cloth Setter device, used for accurate design centering within a hoop. The device has a transparent plastic bar with marked cross.



- 8 Select a size option from the **Size** panel:
 - **Actual Size:** the design is printed at the same size it will be stitched.
 - **Fit to Page:** large designs will be reduced to fit the printing paper, small designs will be enlarged.
 - **% of Actual:** The design view is resized according to this setting.



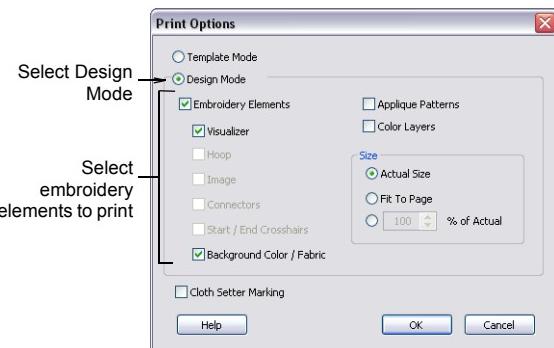
- 9 Click **OK**.

Printing embroidery elements

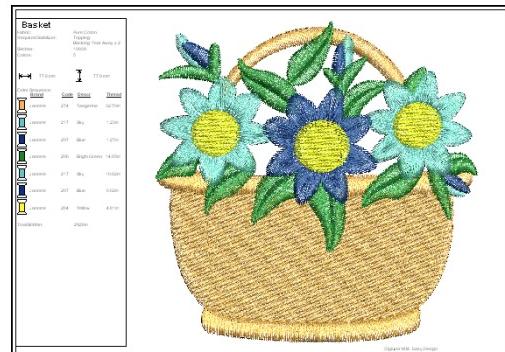
If you choose to print embroidery elements, there are options to include or exclude start/end point crosshairs, connectors, background color/fabric as well as the current hoop. Design information includes author, estimated length of upper thread per color and total bobbin usage.

To print embroidery elements

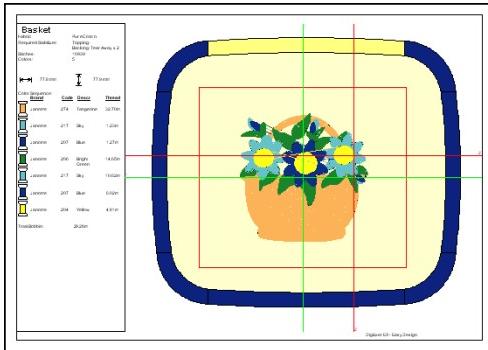
- 1 Open the **Print Options** dialog. See [Setting print options](#) for details.



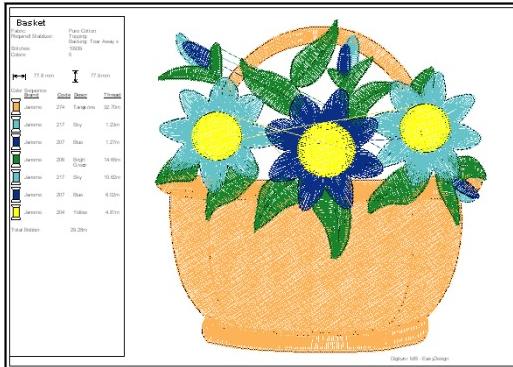
- 2 Select the **Embroidery Elements** option in the **Elements** panel if not already selected.
- 3 Choose the **Vizualizer** option to print out graphical representation of what the final embroidery will look like. With this option selected, the **Background Color/Fabric** element is also available. See also [Changing backgrounds](#).



- 4 Deselect the Visualizer option and experiment with other available options:
 - **Hoop:** The hoop is included in the printout.



- **Start/End Crosshairs:** Start and end needle positions are included in the printout. The green crosshairs indicate the start point of the design, while the red crosshairs, the end point. By default, the green crosshairs are usually set to the center of the hoop.
- **Image:** The design image is included in the printout.
- **Connectors:** All connecting stitches in the design are displayed.



 **Note** With **Vizualizer**, the **Connectors** option is disabled – i.e. you cannot view connecting stitches in this view mode.

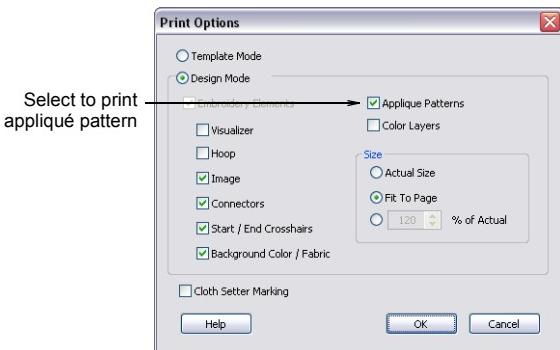
Printing appliqué patterns

 Use Print Preview (Standard toolbar) to preview a design printout.

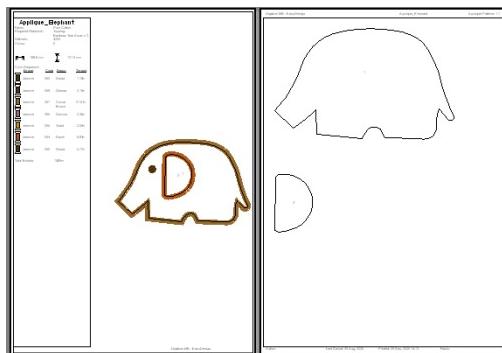
Print a copy of the appliqué pattern to use to cut out the fabric pieces. Each appliqué pattern piece is numbered according to the stitching sequence.

To print an appliqué pattern

- 1 Click the **Print Preview** icon.
Your appliqué design displays as it will be printed.
- 2 Click **Options** button.
The **Print Options** dialog opens.



- 3 Select the **Appliqué Patterns** checkbox and click **OK**. Each appliqué pattern piece is numbered according to the stitching sequence.



Note If the **Actual Size** option is selected, both an assembled appliqué layout and individual patterns in the actual size are created on separate pages. If the **Fit to Page** or **% of Actual** options are selected, the assembled appliqué layout is created in the selected size, but individual patterns are still printed in the actual size on separate pages.

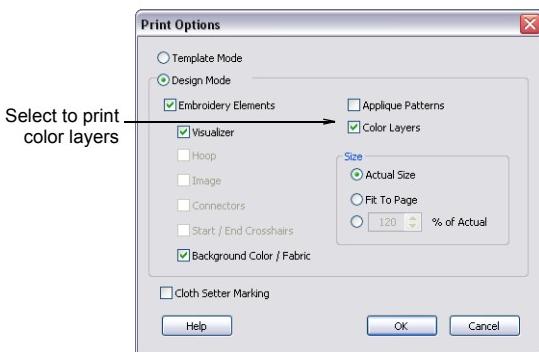
- 4 Click **Print**.

Printing color layers

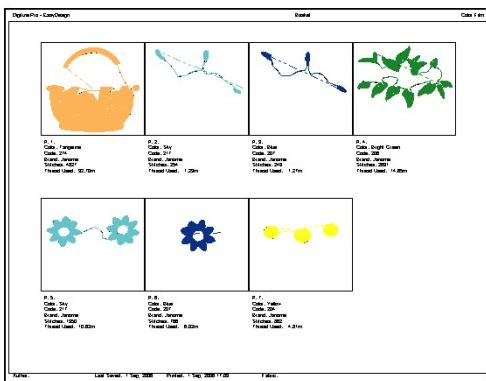
The **Color Layers** option lets you include a list of color layers in the current design, together with color and stitch information for each layer.

To print color layers

- 1 Click the **Print Preview** icon.
Your design displays as it will be printed.
- 2 Click **Options** button.
The **Print Options** dialog opens.



- 3 Select the **Color Layers** checkbox and click **OK**.
 - 4 Click the **Next Page** button, as required.
- A list of color layers is displayed together with color and stitch information for each layer.



The following information is included:

- **Number:** in the stitching sequence
- **Color:** color name listed in the associated thread chart
- **Code:** thread code for ease of ordering
- **Brand:** thread brand – e.g. Isacord 40

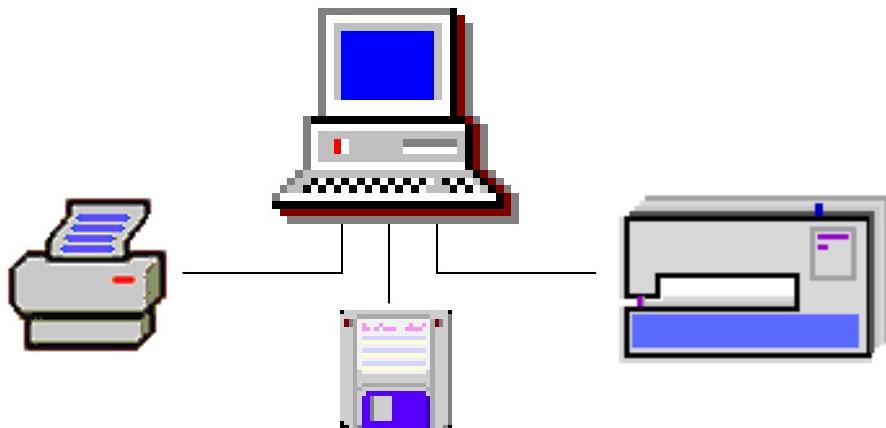
- **Stitches:** total stitch count for individual color layer
- **Thread Used:** total stitch length of the individual color layer in the measurement unit currently set for the system – e.g. ‘meters’.

- 5 Click **Print**.

Chapter 26

READING AND WRITING DESIGN FILES

You can output embroidery designs in a variety of ways – saving to computer, USB memory stick, floppy disk, ATA PC card, or sending directly to machine for stitching.



Digitizer EX uses three embroidery file formats – JAN, JEF and SEW – which allow you to make the most of both outline and stitch formats. JAN format is an object-based format while JEF and SEW formats are stitch-based. By default, EasyDesign saves to JAN format while EasyEdit saves to JEF. These formats contain all information necessary both for stitching a design and for later modification. When opening designs created or saved in other formats, EasyDesign converts the design internally to JAN format while EasyEdit converts to JEF format. You can then modify it using the full range of Digitizer EX features.

This section describes embroidery stitch and outline design formats, as well as how to open embroidery files in Digitizer EX. It also describes saving designs for machine as well as sending and receiving designs by direct connection. Writing designs to Flash Memory reader/writer is also covered.

Embroidery design formats

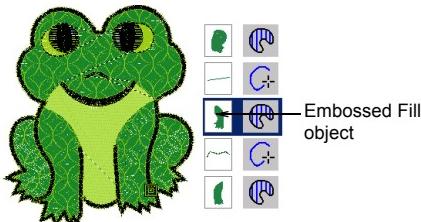
Embroidery designs are saved in one of two formats – ‘outline’ format or ‘stitch’ format. JAN is an outline format and JEF and SEW are stitch formats.



Note For details of specific formats supported by Digitizer EX, see [Supported embroidery file formats](#).

Outline files

Outline or ‘condensed’ files are high-level formats which contain object outlines, object properties and stitch data. When you open an outline file in EasyDesign, corresponding stitch types, digitizing methods and effects are applied.



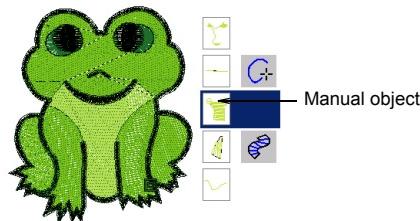
Outline files can be scaled, transformed and reshaped without affecting stitch density or quality. After modification in EasyDesign, you can choose to save your design to the native JAN format, or to a different format altogether.

Stitch files

Different embroidery machines speak different languages. Each has its own control commands for the various machine functions. Before you can stitch a design, it must be in a format which can be interpreted by the machine.

Stitch or ‘expanded’ designs are low-level formats for direct use by embroidery machines. They contain information about the position, length and color of each stitch. When they are read into EasyEdit, stitch files do not contain object

information such as outlines or stitch types, but present the design as a collection of stitch blocks. Stitch blocks consist of individual stitches.



Stitch designs are generally not suited to modification because stitches are not regenerated. However, Digitizer EX patented Stitch Processor technology can interpret object outlines, stitch types and spacing from stitch data with some success. In this way, you can re-constitute other stitch file format designs for modification in Digitizer EX EasyEdit. These ‘recognized’ designs can be scaled with stitches recalculated for the new outlines. Processing is effective for most stitch designs but cannot produce the same level of quality as original outlines and may not handle some fancy stitches.

By default, stitch files are converted to outlines and objects upon opening. Designs opened in EasyEdit can be output for stitching in another format or you can edit stitches and add new elements.

You can scale stitch format designs, however, because the stitch count does not change, the density increases or decreases with the design size. Thus you should not scale stitch designs by more than ±5% or some areas may be too thickly or too thinly covered.



Original stitch design



Design reduced by 5%



Note Stitch files can be saved in JAN format once they are opened in Digitizer EX EasyDesign.

File sources

While embroidery files are broadly classified as 'outline' or 'stitch', Digitizer EX internally tags files as belonging to one of four types – **Native Design, Imported Outlines, Processed Stitches, or Imported Stitches.**

Source	Description
Native Design	Designs created in Digitizer EX (or equivalent).
Imported Outlines	Designs read from non-JAN outline files where stitches have been generated in Digitizer EX (or equivalent) from original outlines and stitching data.
Processed Stitches	Designs read from stitch files where stitches have been regenerated by processing.
Imported Stitches	Designs read from stitch files, where outlines may or may not have been recognized, but stitches have not been regenerated through stitch processing. Note, however, that if you change a stitch design – e.g. add a lettering object – the status changes to 'Processed Stitches' even though the imported stitches may not have been regenerated.

For information about the source of a design file, refer to the **Properties** dialog. See [Viewing design information](#) for details.

Opening embroidery files in Digitizer EX

EasyDesign uses an 'object-based' approach to embroidery design, saving shapes as outlines that can generate stitches automatically, based on preset object details. Embroidery objects can be resized, reshaped and transformed as individual elements within a single design. Stitches regenerate automatically after every change.

EasyEdit uses a 'stitch-based' embroidery format where an entire design is a single object made up of individual stitches. EasyEdit lets you take a stitch-based design, and resize or transform it as a

whole, or modify individual stitches for subtle changes and fine-tuning. You can only edit stitches in EasyEdit.

Each application creates a different type of embroidery file, giving you the option to save in the format you choose.

Which application do I use?

Use EasyDesign to...	Use EasyEdit to...
<ul style="list-style-type: none"> ◆ Create new designs ◆ Add new objects to an existing design ◆ Combine designs in a single file ◆ Add lettering to a design ◆ Add or remove parts of a design ◆ Reshape parts of the design ◆ Automatically digitize a design from an image 	<ul style="list-style-type: none"> ◆ Stitch out a design already in a stitch-oriented design format ◆ Combine and transform stitch blocks, or the whole design ◆ Fine-tune a design at the stitch level



Try this! If you want to scale a design, edit an outline or change a stitch type, use EasyDesign. By default, stitch files are converted to outlines and objects upon opening. If you do not want to scale the design by more than ±5%, or only want to make stitch edits, use EasyEdit.

Object/outline recognition

When you convert a stitch file (JEF or SEW) to outline format (JAN), Digitizer EX reads stitch data stitch-by-stitch according to the needle penetration points. It recognizes stitch types, spacing and length values, stitch effects, and can determine object outlines.

All filled areas in a design become fill or outline objects with fill or outline stitch properties as well as general properties. Stitch types are assigned as Satin or Weave depending on the pattern of needle penetrations. If an object is not recognized, it contains only general and connector properties only and will not scale well.

Recognized object outlines and stitch values are stored as object details in Digitizer EX. This means you can scale and transform recognized designs in the usual way. You can also change the stitch

density of the whole or selected parts of a design, and/or of certain stitch types.

Recognition limitations

If a stitch type is not recognized accurately, the values in the **Object Details** dialog will not match the stitches. The stitches will remain the same as in the original design, until you make changes and regenerate them. If you change the design, stitches will be regenerated according to the object properties.

Saving designs for machine

Different embroidery machines understand different languages. Each has its own control commands for the various machine functions. Before you can stitch a design, it must be in a format which can be interpreted by the machine. Before design files are sent to machine, they are automatically converted to JEF stitch file format. They can also be saved directly to hard disk. When saving in JEF format, you must choose the particular machine type you wish to save for. See also [Sending and writing designs](#).

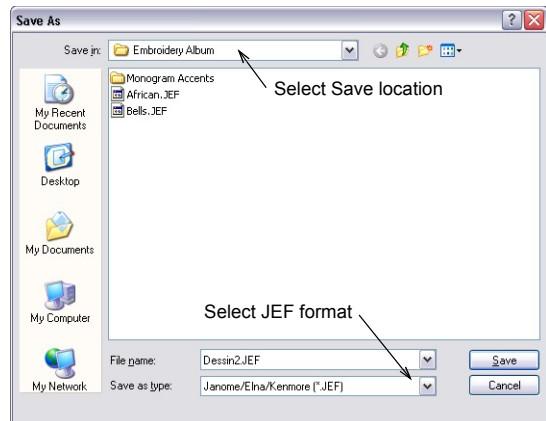


Note Digitizer EX records the embroidery area of custom hoops to JEF file which can then be read by multi-needle machines to determine the stitching area. On the other hand, the stitching area of single-needle machines is determined by the selected hoop type. If the file contains a 'non-standard' (custom) hoop code, the hoop size is automatically based on the design size which is used to limit the stitching area. See [Defining custom hoops](#) for details.

To save a design for machine

- 1 Select **File > Save As**.

The **Save As** dialog opens.



- 2 Select the folder where you want to save the design from the **Save In** list.
- 3 Enter a name for the design in the **File name** field.
- 4 Select JEF as the file format from the **Save as type** list.
- 5 Select the required machine type and click **OK**.
- 6 Click **Save**.

Sending and writing designs

Digitizer EX gives you the option of sending designs directly to machine or to memory card. The option you choose depends, in part, on the machine you are using.



Note Before design files are sent to machine, they are automatically converted to JEF stitch file format. See also [Saving designs for machine](#).

Supported machine models

With both EasyDesign and EasyEdit, Digitizer EX is able to automatically detect which type of supported machine is currently connected to the PC USB port. The **Machine** menu items are determined by the type of machine connected to the PC. If no machine is detected, all menu items will be grayed out. Your distributor will advise you about supported machine types.

Supported memory cards

Besides USB connection, you can write to ATA PC card – 'Flash Memory' – in a similar way as you would save to floppy disk. The ATA PC card is a

PCMCIA standard PC memory card that is used for storing designs in JEF format to be read/written from/to machine. The ATA PC card is designated as a drive in your computer. The drive designation may become E: or F: or some other letter. After writing your design, you simply insert the card into the ATA PC card slot of your machine (if supported), and read the design.

Precautions using ATA PC cards

- It is recommended to save data stored in the machine's built-in memory to hard disk or ATA PC card to prevent accidental loss of data due to improper operations or malfunctions.
- If an ATA PC card is formatted on PC or on your machine, all information on the card will be lost. Check the contents of any used cards before formatting them.



Note If your computer is a laptop, there is a slot where you can insert the ATA PC card and its adapter directly. If you have a desktop computer, you will need an ATA PC card reader/writer connected to a USB port.

USB memory sticks

The latest machine models can read from and write to USB memory sticks. These are very convenient portable memory devices which can hold large amounts of data in a small 'stick'.

Sending designs to machine



Use Send to Machine (Standard toolbar) to send a design to a machine for stitching.

Depending on the machine model, the direct machine connection option may be available to you. This means you can send individual or multiple design files directly to three possible destinations:

- Built-in: internal machine memory
- ATA PC Card: PC memory card slot on machine which can be used as an ATA PC card reader/writer
- USB Memory: USB stick attached to your machine.



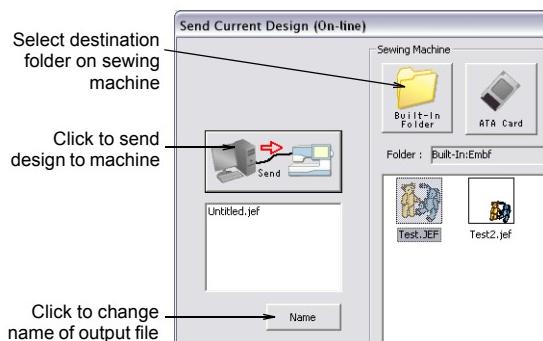
Try this! Alternatively, you can use an external 'Flash Memory' (ATA PC) reader/writer to write designs in JEF format directly to card. See [Writing to Flash Memory reader/writer](#) for details.

Sending the current design to machine

The procedure for sending a single design to machine varies slightly with the machine model, but the principle is the same. Whichever machine you are using, the steps will involve one or all of the following:

- Select the machine model you intend to connect to.
- Insert the ATA PC card or USB stick into your machine as required.
- Open or create the design you want to send.
- Click the **Send to Machine** icon or select **Machine > Send Current Design**.

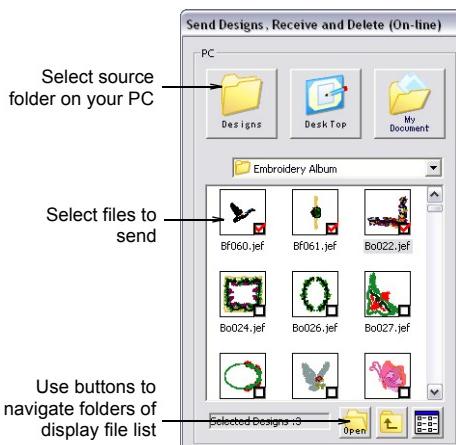
The particular dialog which opens will depend on the selected machine model.



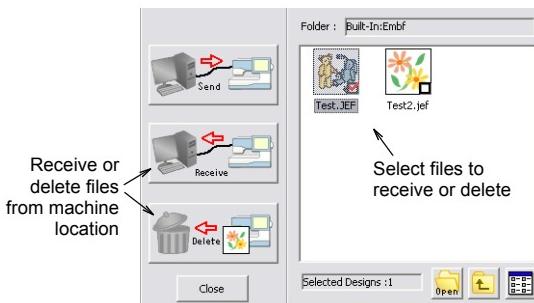
- Select a storage location on the sewing machine – machine memory (built-in folder), ATA PC card, or USB memory stick.
- Start the file transfer.
In the unlikely event that a file exceeds the limits set, it will be split into two or more files.

Sending or receiving multiple designs

As with single designs, the procedure for sending multiple designs to machine varies slightly with the machine model you are using.



In addition to sending design files to machine, you can generally receive or delete files from the destination folder.



Writing to Flash Memory reader/writer

 Use Write to Card (Standard toolbar) to send a design to an ATA PC card.

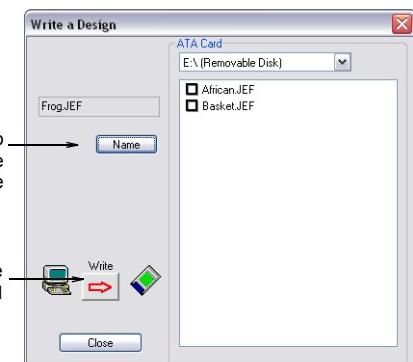
You can use an external 'Flash Memory' (ATA PC) reader/writer to write designs in JEF format directly to card. Some machines do not support direct connection, in which case you will need to use this method to transfer design files from your PC to ATA PC card to machine. Depending on the machine model the card is intended for, make sure this is selected as your current machine. After writing your design, simply insert the card into the ATA PC card slot of your machine, and read in the design.

Writing a design to ATA PC card

The procedure for writing a single design to card varies slightly with the machine model, but the principle is the same. Whichever machine you are using, the steps will involve one or all of the following:

- Select the machine model you intend to write to.
- Make sure the reader/writer is securely plugged into the USB port of your PC.
- Open or create the design you want to send.
- Click the **Write to Card** icon or select **External Media > Write a Design**.

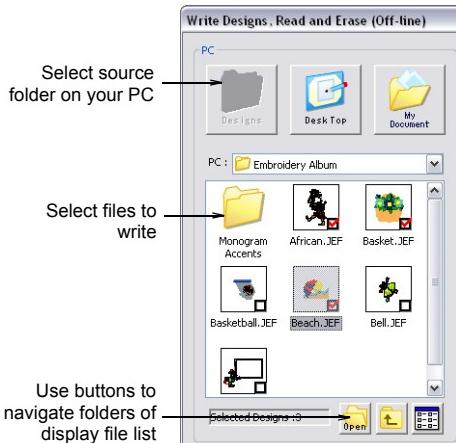
The particular dialog which opens will depend on the selected machine model.



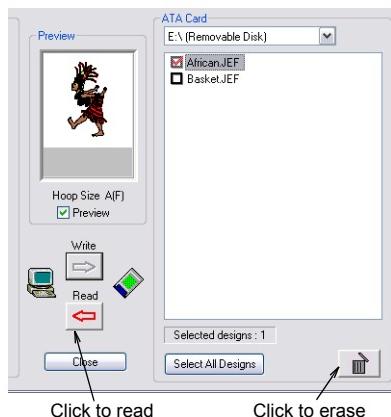
- Start the file transfer.

Writing multiple designs to ATA PC card

As with single designs, the procedure for writing multiple designs to ATA PC card varies slightly with the machine model. Select the machine model you intend to write to and select **External Media > Write Designs, Read and Erase**. The particular dialog which opens will depend on the selected machine model.



In addition to writing design files to machine, you can generally receive or delete files from the destination folder.



Part VIII

DESIGN

MANAGEMENT

Design Gallery provides an efficient way for managing embroidery designs. This design management tool can access design files stored on your computer hard disk, CD-ROM, or floppy disk. It recognizes all design file formats used by EasyDesign.

Chapter 27

DESIGN GALLERY BASICS

Design Gallery provides an efficient way for viewing and managing embroidery designs. With this design management tool, you can browse design files stored on your computer hard disk, CD-ROM, or floppy disk, as well as cut, copy, paste and delete them. It recognizes all design file formats used by EasyDesign. See also [Supported Files and Hoops](#).

This section describes how to use Design Gallery to access and view designs in folders. It also covers cutting, copying, pasting, and deleting designs in folders.

Viewing designs in Design Gallery

Design Gallery does not require a separate installation. It works as an integral part of Digitizer EX and is easy to set up and get started. Design Gallery displays thumbnails and limited design information whenever a design folder is accessed. You can filter the contents of the display window to show only certain file types. You can also rename folders, add sub-folders and delete folders without leaving Design Gallery.

Opening Design Gallery



Double-click the desktop icon to open Design Gallery. EasyDesign will also open by default.



If EasyDesign is already open, click Design Gallery (Standard toolbar) to open Design Gallery.

Navigating to design folders with Design Gallery is very similar to browsing with Windows Explorer.

Your access to design folders on your network is only limited by network access rights determined by your System Administrator. Design Gallery lets you view any supported design file type residing in design folders. See also [Supported Files and Hoops](#).



Note If you start Design Gallery from the desktop or from the Windows **Start** button, EasyDesign will also open. If your computer is slow or you have many applications running, Design Gallery may not open.

To open Design Gallery

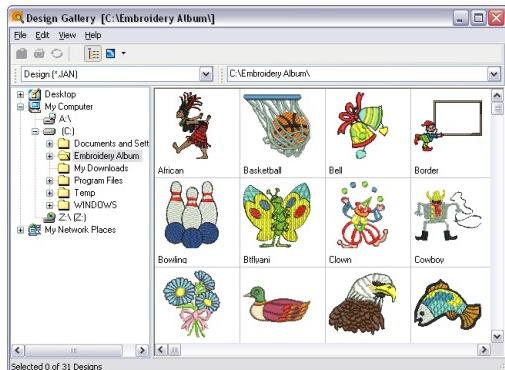
- 1 Double-click the Design Gallery icon on the Windows desktop.

Alternatively, if EasyDesign is already open, click the Design Gallery icon on the Standard toolbar.

Design Gallery and EasyDesign open in separate windows. Design Gallery defaults to the **C:\Embroidery Gallery** folder, showing all of your JAN designs as thumbnails.



Try this! If EasyDesign is hiding Design Gallery from view, switch between them using the Windows **Alt + Tab** function.



Note The thumbnail image generation process can be very slow on older machines or if there are a lot of designs in the selected folder. Holding down the **Alt** key will abort the redraw. The thumbnail will be drawn using a default yellow exclamation mark. This does not mean that the design is missing. See also [Locating missing files](#).

- 2 Drag the split bar between the folders and thumbnails to the left or to the right to resize the window sections.
- 3 To find a design which is not in the current folder – e.g. **C:\Embroidery Gallery** – use the folder listing to locate the required folder.



Try this! If not all drives or folders are displayed, click the **+** to the left of **My Computer** to show all local and network drives available to your PC.

- 4 Click a folder in the folder listing to display its contents in the display window.

You can list the folder contents in different ways. See [Sorting files in folders](#) for details.



Try this! Close Design Gallery in **View > Design List** mode so that it opens more quickly next time. See [Displaying design thumbnails and summary information](#) for details.

Changing locale

Select **Change Locale** (**View** menu) to switch between locales.

During installation of the Design Gallery software, optional languages (locales) can be selected for dialogs and messages – e.g. English, French, German, etc. You can switch between these locales at any time after installation.

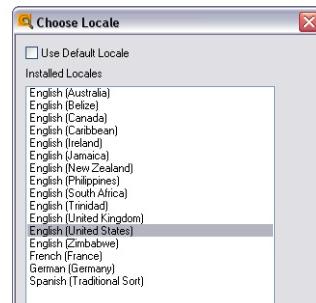


Warning If the default locale is not the same as the language of the Operating System, then this option will not work properly. See also 'locale' in Windows Help for information about changing Windows to suit different locales.

To change locale

- 1 Open Design Gallery. See [Opening Design Gallery](#) for details.
- 2 Select **View > Change Locale** to open the locale required.

The **Choose Locale** dialog opens.



Note Only those locales selected when Design Gallery was installed will be listed.

- 3 Select the locale required and click **OK** to make the change.



Try this! See also 'locale' in Windows Help for information about changing keyboards, fonts and so on to suit different locales.

Displaying design thumbnails and summary information



Click **Change Design View** to select thumbnails only, thumbnails with summary, or a detailed list only.

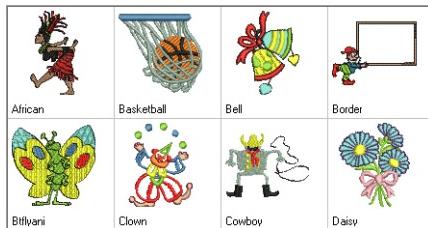
The designs in Design Gallery can be listed as thumbnails only (the default), thumbnails and summary information, or a detailed list only.



Try this! Designs can also be displayed full screen using EasyDesign. See [Opening designs in EasyDesign](#) for details.

To display design thumbnails and summary information

- 1 Open Design Gallery and select a folder.
- 2 Use the viewing options to view the designs in the folder in the display format you require:
 - To display the designs as thumbnails only, click the **Change Design View** icon and select **Thumbnails** from the dropdown menu. Or, select **View > Design Thumbnails**.



Design Thumbnails view

- To display the designs as thumbnails with stitching details, click the **Change Design View** icon and select **Summary** from the dropdown menu. Or, select **View > Design Thumbnails and Summary**.

	S 10571 C 5 H 98.66 W 55.30 9/07/2003 V 10.0 JAN		S 5724 C 4 H 51.81 W 55.72 9/07/2003 V 10.0 JAN		S 3550 C 5 H 66.34 W 48.59 9/07/2003 V 10.0 JAN
	S 5360 C 7 H 77.62 W 103.91 9/07/2003 V 10.0 JAN		S 5597 C 4 H 62.31 W 49.01 9/07/2003 V 10.0 JAN		S 15496 C 6 H 79.81 W 84.01 9/07/2003 V 10.0 JAN

Design Thumbnails and Summary view

- To display the designs in a detailed list, click the **Change Design View** icon and select **List** from the dropdown menu. Or, select **View > Design List**.

Designs are listed showing design name, file size, file type, version, etc. Click the column header to sort the list.

Design Name	File Size	File Type	Version	Last Changed	Stitches
African.JAN	79.4 Kb	JAN	10.0	9/07/2003 7:14:24 PM	10571
Basketball.JAN	38.4 Kb	JAN	10.0	9/07/2003 7:15:44 PM	5724
Bell.JAN	36.9 Kb	JAN	10.0	9/07/2003 7:16:44 PM	3550
Border.JAN	44.0 Kb	JAN	10.0	9/07/2003 7:17:44 PM	5360
Bowling.JAN	32.8 Kb	JAN	10.0	9/07/2003 7:19:32 PM	5597
Btllyani.JAN	73.7 Kb	JAN	10.0	9/07/2003 7:19:28 PM	15496
Clown.JAN	39.9 Kb	JAN	10.0	11/07/2003 4:03:52 PM	4014
Cowboy.JAN	35.3 Kb	JAN	10.0	11/07/2003 4:04:54 PM	6052
Daisy.JAN	54.3 Kb	JAN	10.0	11/07/2003 4:05:50 PM	5996
Duck.JAN	33.3 Kb	JAN	10.0	11/07/2003 4:06:32 PM	2265
Eagle.JAN	54.8 Kb	JAN	10.0	11/07/2003 4:07:12 PM	5521
Fish.JAN	44.5 Kb	JAN	10.0	11/07/2003 4:08:00 PM	6200
Floral Design1.JAN	54.3 Kb	JAN	10.0	11/07/2003 4:09:08 PM	6252
Floral Design2.JAN	42.0 Kb	JAN	10.0	11/07/2003 4:09:52 PM	4292
Flower1.JAN	24.6 Kb	JAN	10.0	11/07/2003 4:10:36 PM	1721

Design List view



Note The number of selected designs is displayed in the status bar at the bottom of the Design Gallery window.

Viewing designs in the whole window



Click Folders to toggle the folder listing.

It is often more convenient to view designs in folders in the whole window. When doing so, you can always browse for designs using the **Look In** list or **Browse Location** option.

To view designs in the whole window

- 1 Click the **Folders** icon.

Designs are now viewable across the window.



- 2 To view designs in another folder, select from the **Look In** dropdown list.



Try this! Alternatively, select **View > Browse Location** to open the **Browse For Folder** dialog.



Locating missing files

If users incorrectly move files, the normal design thumbnail is usually replaced by a 'missing design' thumbnail when Design Gallery is next opened. Each color indicates the likely cause:

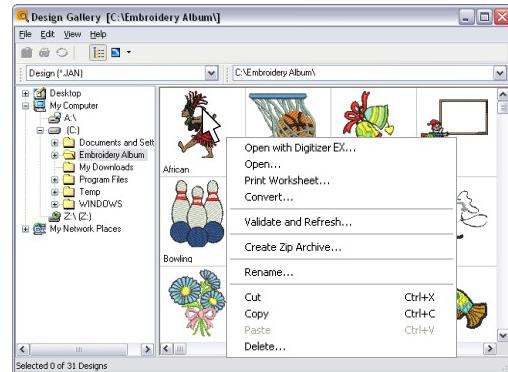
Icon	Description
	This means that Design Gallery cannot find the design file. Replace missing files from backup or another source. If this is not possible, delete the record or refresh the directory. See also Refreshing the display .
	This means that Design Gallery has found an up-to-date thumbnail but doesn't recognize the format. Use Validate and Refresh to update the display. Design Gallery will try to make a replacement next time the folder is opened or refreshed. See also Refreshing the display .
	Design Gallery recognizes a pre-determined set of file types as per the file type dropdown list. If it sees a design that has the required file suffix – JAN, BMP, etc – but it is unable to read the file, it will display the green question mark. Locate the file and delete it.

Refreshing the display

Occasionally, your screen will not show changes you have made until you refresh the display. Changes to folders may not display either until you refresh the folder listing. If graphics and thumbnails still do not appear correctly, or if you have updated your Digitizer EX software, you may need to 'validate and refresh'.

To refresh the display

- To refresh the display window, select **View > Refresh**, or press **F5**.
- To refresh folders in the folder listing, select **View > Refresh Tree Node**. Alternatively, select the node you want to refresh, right-click and select **Refresh** from the popup menu.
- To validate and refresh a folder, select **Validate and Refresh** from either View or popup menus.



Try this! Occasionally, Design Gallery displays red, blue or green question marks and a short description instead of a graphic thumbnail. See [Locating missing files](#) for details.

Accessing designs in folders

Design Gallery lets you select designs residing in folders. Once selected, you can manipulate them in a variety of ways – e.g. cutting, copying, pasting, editing the record, and converting designs to other formats. You can also open designs in EasyDesign directly from Design Gallery for viewing or editing.



Try this! With the file selected, right-click to open a popup menu which includes the commands Open, Print, Convert, Stitch to Machine, and Delete.

Selecting designs in folders

Designs must be selected before an action can be performed – e.g. view, open or copy a design. A group of designs, a range, or all the designs in a folder can be selected. A group is made up of any

selected designs. A range is a series of consecutive designs.

To select designs in a folder

- 1 Open Design Gallery and select a design folder.
- 2 Display designs as thumbnails or as a details list. See [Displaying design thumbnails and summary information](#) for details.
- 3 Sort designs by required category – e.g. sort by customer to list each customer's designs consecutively. See [Sorting files in folders](#) for details.
- 4 Select a design or designs.
 - To select a range of items, hold down **Shift** as you select.
 - To select multiple items, hold down **Ctrl** as you select.
 - To select all designs in the current folder, select **Edit > Select All**.
- 5 To deselect all selected designs, select **Edit > Deselect All**, or click any unselected design.



Try this! To deselect a single design amongst a group of selected designs, click it again while holding down the **Ctrl** key.

Opening designs in EasyDesign



Click Open Design to open a selected design or designs in EasyDesign.

Any designs selected in the Design Gallery display window can be opened in EasyDesign for viewing or editing.

To open designs in EasyDesign

- 1 Open Design Gallery and select a design folder.
- 2 Select a design or designs.
 - Try this! If you want to open several designs at once, select the details list view. See [Displaying design thumbnails and summary information](#) for details.
- 3 Click the **Open** icon.



Try this! If you want to open several designs at once, select the details list view. See [Displaying design thumbnails and summary information](#) for details.

Alternatively, if displaying designs as thumbnails, double-click a single design thumbnail.

The selected design or designs are displayed in the EasyDesign window ready for editing.



Try this! To switch between EasyDesign and Design Gallery:

- Hold down the **Alt** key, then tap the **Tab** key until the EasyDesign icon is highlighted. Release the **Alt** key.



- Alternatively, click the EasyDesign icon on the Windows taskbar.



Creating new designs with custom templates

You can open a new design template in EasyDesign from within Design Gallery.

To create new designs with a custom template

- 1 Select **File > New**. EasyDesign opens and the **New** dialog appears.



Note If there is no template other than default, the **New** dialog may not appear.

- 2 Select a template from the list.
- 3 Click **OK**.

Reconnecting Design Gallery to EasyDesign

Occasionally Design Gallery may encounter a problem preventing it from connecting with EasyDesign.

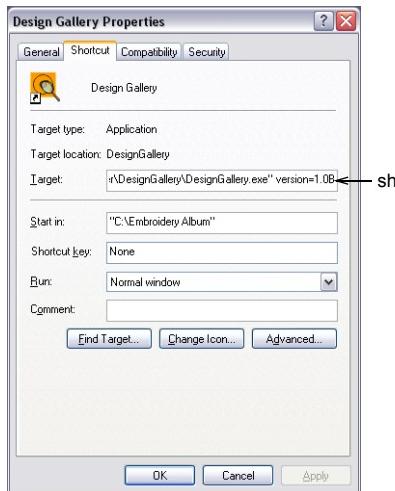
To reconnect Design Gallery with EasyDesign

- 1 Check that your dongle security device is connected.
- 2 Open Design Gallery and check that it runs correctly on its own – close Design Gallery, then open EasyDesign by clicking its icon on the Windows Desktop.
- 3 If none of the above correct the problem, re-install EasyDesign.
- 4 Check that the version of EasyDesign you are running is the same as that registered in Design Gallery

Shortcut Properties:

- ♦ Right-click the Design Gallery icon on your Windows Desktop, then select **Properties**.

The **Design Gallery Properties** dialog opens.



- ♦ Click the **Shortcut** tab, and read the last text in the **Target** field – e.g. version0.1D.

This version should be identical to the version of EasyDesign you are running. If it is **not**, change it to the correct version and click **OK**.

- 5 Install EasyDesign again.

Chapter 28

DESIGN GALLERY ADVANCED FUNCTIONS

Designs in Design Gallery folders can be sorted in various ways. This is useful when you want to select designs to open, print, and so on. Once a design is selected in an Design Gallery folder, you can open it in EasyDesign. You can also batch-convert your JAN and other design files to and from other file formats directly from Design Gallery.

This section describes the more advanced workings of Design Gallery from sorting files to converting designs. It also describes how to print individual designs and catalogs of designs.

Sorting files in folders

The simplest way to sort files in Design Gallery folders is by file type – e.g. JAN files only. Designs can be further sorted in the following ways:

- As simple sorts using **View > Sort by (Name, Type, Size, or Date)**. See [Running simple sorts using the View menu](#) for details.
- As simple sorts using details list headings: by **File Name, Size, File Type, Version, Date, Stitches, or Description**. See [Running simple sorts using the details list](#) for details.

Limiting file types displayed

With Design Gallery you can filter the contents of any design folder to show only certain types of file – e.g. only JAN files.

To limit file types displayed

- 1 Open Design Gallery and select a design folder. See [Viewing designs in Design Gallery](#) for details.
 - 2 Click the **Files** dropdown on the toolbar.
- All Artwork Files
All Artwork Files
All Embroidery Files
All Files
Deco_Brother_Babylock (*.PEC)
Deco_Brother_Babylock (*.PES)
Design (*.JAN)
Husqvarna Viking (*.HUS)
Jef (*.JEF)
Janome_Elna_Kenmore (*.JEF+)
Janome_Elna_Kenmore (*.SEW)
Melco (*.EXP)
Pfaff (*.PCS)
Prairie, Huskygram, Singer EU (*.CSD)
Singer (*.XXX)
Tajima (*.DST)
Template (*.JMT)
- 3 Select:
 - **All Files** to show every file type in the folder
 - **Artwork Files** to display only BMP and PNG files
 - Any other option to display only files of that type – e.g. templates.

Running simple sorts using the View menu

You can sort your thumbnails or details lists by any of four types. Designs can be sorted whether they are displayed as thumbnails or as a details list.

To run a simple sort using the View menu

- 1 Open Design Gallery and select a design folder. See [Opening Design Gallery](#) for details.
- 2 List the designs as either thumbnails or as a details list. See [Displaying design thumbnails and summary information](#) for details.
- 3 Select **View > Sort by Name, Sort by Type, Sort by Size, or Sort by Date**.

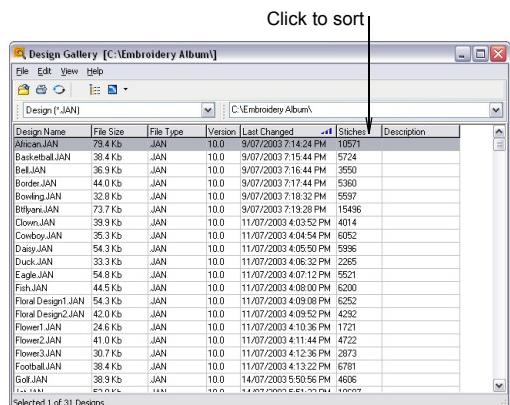
The designs will be sorted according to the option selected.

Running simple sorts using the details list

You can sort details lists by clicking the column headings. Designs are arranged according to the heading selected. Repeating reverses the sort order. Designs must be displayed as a details list.

To run a simple sort using the details list

- 1 Open Design Gallery and select a design folder. See [Opening Design Gallery](#) for details.
- 2 List the designs as a details list. See [Displaying design thumbnails and summary information](#) for details.



- 3 Click the heading at a column to be sorted – e.g. **Name**.

The designs will be sorted in the order of the selection.

- 4 Click the heading again to reverse the order.

Printing designs and catalogs

You can print [design printouts](#) for selected designs, or catalogs containing thumbnails plus limited text details.



Try this! Before printing, sort designs into useful groups. For example, sort by **Type**. See [Sorting files in folders](#) for details.

Printing design printouts



Use Print to print design printouts for selected design(s).

You can print design printouts for selected designs in folders, including images, hoops and Vizualizer views for each design.



Note Unlike **Print Designs**, this option can provide all of the design and sewing information available, but it uses more paper to do so. See also [Printing design catalogs](#).

To print a design printout

- 1 Open Design Gallery and select a design folder. See [Opening Design Gallery](#) for details.
- 2 Select and sort the designs to be printed using **Sort**. See [Sorting files in folders](#) for details.
- 3 Click the **Print** icon.

The Windows **Print** dialog opens.

- 4 Click the Options button.

The **Print Options** dialog opens.



Select items to include

- 5 Set design printout options to display the information you want in the required format.

- 6 Click **OK**.

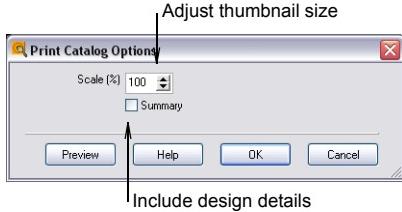
Printing design catalogs

Print catalogs of designs containing thumbnails plus limited text details.

To print a design catalog

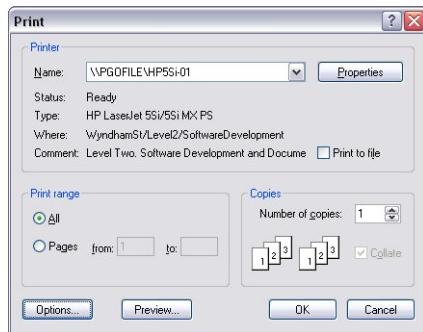
- 1 Open Design Gallery and select a design folder. See [Opening Design Gallery](#) for details.
- 2 Sort and select the designs to be printed in the catalog using **View > Sort**. See [Sorting files in folders](#) for details.
- 3 Select **File > Print Catalog**.

The **Print Catalog Options** dialog opens.



- 4 Change the **Scale (%)** amount if you want your thumbnails bigger or smaller.
- 5 Select **Summary** if you want design details to be printed.
- 6 Click **OK**.

The Windows **Print** dialog opens.



- 7 From the dropdown list, select the name of the printer attached to your PC as required.
- 8 Click **Properties** to modify paper size and other options in the Windows **Print** dialog.
- 9 Click **OK** to print the catalog.



Try this! If the catalog requires more than one page, you can select which page to print in the Windows **Print** dialog.

Converting design files in folders



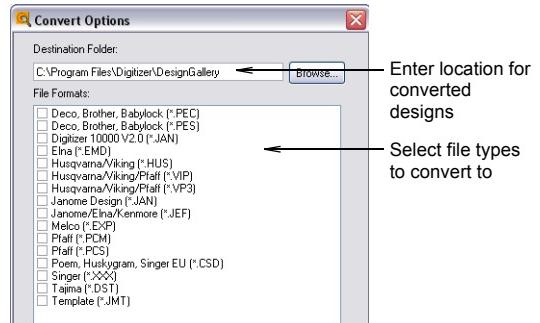
Use Convert to convert from one design file type to another.

You can convert your JAN and other design files to and from other file formats directly from Design Gallery.

To convert design files in folders

- 1 Open Design Gallery and select a design folder. See [Opening Design Gallery](#) for details.
- 2 Select the file(s) to be converted. See [Selecting designs in folders](#) for details.
- 3 Click the **Convert** icon.

The **Convert Options** dialog opens.



- 4 Select the file types you want to convert to.
- 5 Browse to the folder where you want to store the converted designs using the **Browse** button and the [Browse for Folder](#) dialog.
- 6 Click **OK** to start the conversion.

The converted designs will be stored in the nominated folder.

Organizing designs in folders

You can rename folders, add sub-folders and delete folders without leaving Design Gallery.

Renaming, adding and deleting folders

You can rename folders, add sub-folders and delete folders without leaving Design Gallery.

To rename, add or delete folders

- 1 Open Design Gallery. See [Viewing designs in Design Gallery](#) for details.
- 2 Browse to the folders you want to rename, delete or add sub-folders to.
- 3 Add, rename, or delete folders as required:
 - To add a sub-folder to another, select the folder and right-click. Select **Add Sub-directory** and type in the name when the new sub-folder appears.
 - To rename a folder, select it and right-click. Select **Rename** from the popup menu, and type in the new name.
 - To delete a folder, select it and right-click. Select **Delete** from the popup menu. You will be prompted to confirm the deletion.

Copying and pasting designs

Once a selected design is copied, it can then be pasted to another location using **Paste**. A copied design can be pasted any number of times.

To copy and paste a design

- 1 Open Design Gallery. See [Viewing designs in Design Gallery](#) for details.
- 2 Select any number of designs. See [Selecting designs in folders](#) for details.
- 3 Select **Edit > Copy**.

- 4 Change to another folder using the directory if required.

A design can be pasted to the same folder as the original design.

- 5 Select **Edit > Paste**.

If the selected design – e.g. Bear.JAN – is pasted into the current folder, and the current folder contains the original design, or a file of the same name, the new design is automatically named **Copy of Bear.JAN**. You can then change the name of the new file by right-clicking its name, selecting **Rename** and typing the new name. Press **Enter** to complete the name change.



Note If you rename the file, ensure that the three letter extension – e.g. JAN – is not altered.

Cutting and pasting designs

When a selected design is cut, the design is removed from the current folder. The design can then be pasted at another location using the **Paste** command.

To cut and paste designs

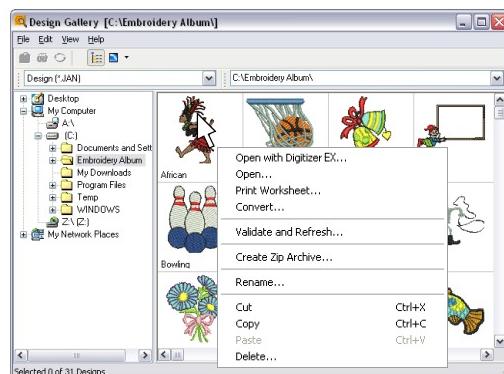
- 1 Open Design Gallery. See [Viewing designs in Design Gallery](#) for details.
 - 2 Select any number of designs. See [Selecting designs in folders](#) for details.
 - 3 Select **Edit > Cut**. A confirmation dialog opens.
 - 4 Click **Yes** to cut the design.
 - 5 Browse to the folder where you want to paste the file or files.
 - 6 Select **Edit > Paste** to paste the selected design into the new folder.
- If a design of the same name already exists, each pasted copy is renamed.

Renaming designs in folders

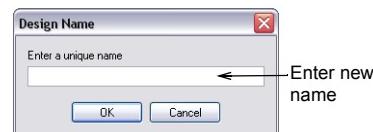
Duplicate designs, designs with misleading names, and designs with misspelled names can be quickly renamed without opening them.

To rename a design in a folder

- 1 Open Design Gallery. See [Viewing designs in Design Gallery](#) for details.
- 2 Ensure that the design you select is not currently open in EasyDesign.
- 3 Right-click and select **Rename** from the popup menu.



The **Design Name** dialog opens.



- 4 Enter a new name.

5 Click OK.

The original design name is overwritten.

Deleting designs

Delete designs to remove them permanently from your PC.

To delete designs from Design Gallery

- 1 Open Design Gallery. See [Viewing designs in Design Gallery](#) for details.
- 2 Select any number of designs. See [Selecting designs in folders](#) for details.
- 3 Select **Edit > Delete**.
A confirmation dialog opens.
- 4 Click **Yes** to delete the design.



Warning The file is removed permanently from the folder.

Part IX

APPENDICES, GLOSSARY & INDEX

Digitizer EX Feature Table

Capabilities	Feature Name	EasyDesign	EasyEdit	Reference
Basics				Basic Procedures
Show/hide toolbars		●	●	Showing or hiding toolbars
Multiple undos/redos		●	●	Undoing and redoing commands
Create new designs		●	●	Creating new designs
Display hoops		●	●	Displaying the hoop
Display grids		●	●	Displaying the grid
Display measurements		●	●	Measuring distances on screen
Save designs		●	●	Saving designs
Viewing Designs				Viewing Designs
View the whole design		●	●	Viewing the whole design
Zoom and pan		●	●	Zooming and panning designs
Show design in Overview Window	Overview Window	●	●	Working with the Overview Window
Visualize design stitchout	Vizualizer	●	●	Viewing designs in Vizualizer
Show design needle points and connectors		●	●	Viewing needle points
Show/hide selected objects		●		Viewing selected parts of a design
Show objects by color		●		Viewing design objects by color
Travel through design by stitches/color/function			●	Traveling through the stitching sequence in EasyDesign
Show stitch sequence	Slow Redraw	●	●	Traveling through the stitching sequence in EasyEdit
View design information		●		Redrawing the stitching sequence slowly
Preview design printout		●	●	Viewing design information
Viewing and hiding images		●		Previewing design printouts
Selecting Objects				Selecting Objects
Select all objects in a design		●	●	Selecting all objects in a design
Select individual objects		●	●	Selecting objects by point and click
Select groups of objects		●	●	Selecting objects with Polygon Select
Select objects while 'traveling'		●	●	Selecting objects while traveling through a design
Select objects by color		●		Selecting colors while traveling through a design

Capabilities	Feature Name	EasyDesign	EasyEdit	Reference
Select objects with Resequence dialog		●		Selecting and viewing objects with the Resequence dialog
Grids and Hoops				Grids and Hoops
Set grid spacing		●	●	Setting grid spacing
Change hoops		●	●	Changing hoops
Center hoops		●	●	Centering hoops
Rotate hoops		●	●	Rotating hoops
Define custom hoops		●	●	Defining custom hoops
Change backgrounds		●	●	Changing backgrounds
Digitizing Methods				Manual Digitizing
Digitize run lines	Single Run Line	●		Digitizing lines
Digitize columns and borders	Border	●		Digitizing columns of fixed width
Digitize columns of varying width	Turning Angle Fill	●		Digitizing columns of varying width
Digitize complex shapes with fixed stitch angles	Parallel Fill	●		Digitizing complex shapes with fixed stitch angles
Digitize circles	Parallel Fill Circle	●		Digitizing circles
Digitize squares and rectangles	Parallel Fill Rectangle	●		Digitizing squares and rectangles
Fill Stitches				Fill Stitches
Satin fills	Satin Fill	●		Creating Satin fills
Weave fills	Weave Fill	●		Creating Weave fills
Embossed fills	Embossed Fill	●		Creating Embossed fills
Embroidery Stamps and Motifs				Embroidery Stamps and Motifs
Insert embroidery stamps	Embroidery Gallery	●		Selecting and inserting stamps
Rotate, flip and scale stamps		●		Rotating, flipping and scaling stamps
Scale stamps to an exact size		●		Scaling stamps to an exact size
Create motif runs	Motif Run	●		Creating motif runs
Create motif fills	Motif Fill	●		Creating motif fills
Thread Colors				Thread Colors
Select new current color		●		Selecting a new current color
Recolor selected objects		●	●	Recoloring selected objects
Insert manual color changes		●	●	Inserting manual color changes
Set up thread charts		●		Setting up thread charts

Capabilities	Feature Name	EasyDesign	EasyEdit	Reference
Digitizing with Backdrops				Digitizing with Artwork
Insert images		●		Inserting images
Scan artwork		●		Scanning bitmap images
Copy and paste images		●		Copying and pasting images
Crop images for digitizing		●		Cropping images for digitizing
Reshape cropped images	Reshape	●		Reshaping cropped images
Edit images in graphics applications		●		Editing images in graphics applications
Prepare non-outlined images		●		Preparing non-outlined images
Prepare outlined images		●		Preparing outlined images
Automatic Digitizing				Automatic Digitizing
Match palette colors to an image		●		Matching palette colors to an image
Digitize fills with Click-to-Stitch	Click-to-Stitch	●		Digitizing fills with Click-to-Stitch
Digitize outlines with Click-to-Stitch	Click-to-Stitch	●		Digitizing outlines with Click-to-Stitch
Digitize images automatically with Click-to-Design	Click-to-Design	●		Digitizing images automatically with Click-to-Design
Create embroidery from photographs	Photo Click	●		Creating embroidery from photographs
Modifying Designs				Modifying Designs
Copy and paste objects/stitch blocks		●	●	Copying and pasting objects
Duplicate objects/stitch blocks		●	●	Duplicating objects
Delete objects/stitch blocks		●	●	Deleting objects
Nest objects		●		Nesting objects
Combine designs		●		Inserting designs
Resequence embroidery objects		●		Resequencing embroidery objects
Position and align objects	Align	●		Positioning and aligning objects
Lock and group objects		●		Locking and grouping objects
Scale objects		●		Scaling objects
Rotate objects		●		Rotating objects
Skew objects		●		Skewing objects using click and drag
Flip objects		●		Flipping objects
Reshape objects	Reshape	●		Reshaping objects
Reshape circle objects	Reshape	●		Reshaping circle objects
Adjust stitch angles	Reshape	●		Adjusting stitch angles
Change entry and exit points	Reshape	●		Changing entry and exit points

Capabilities	Feature Name	EasyDesign	EasyEdit	Reference
Object Details and Templates				Object Details and Templates
Set current object details		●		Setting current object details
Change details of selected objects		●		Changing details of selected objects
Change default object details		●		Changing default object details
Create design templates		●		Creating design templates
Modify design templates		●		Modifying design templates
Save current details to a template		●		Saving current details to a template
Delete design templates		●		Deleting design templates
Stitch Quality				Improving Stitch Quality
Change underlays		●		Changing underlays
Adjust Center Run and Edge Run underlay settings		●		Adjusting Center Run and Edge Run underlay settings
Adjust Zigzag underlay settings		●		Adjusting Zigzag underlay settings
Adjust Weave underlay settings		●		Adjusting Weave underlay settings
Compensate for fabric stretch		●		Compensating for fabric stretch
Change fabric settings		●		Changing fabric settings
Manage fabrics		●		Managing fabrics
Advanced Digitizing Techniques				Advanced Digitizing Techniques
Reinforce outlines	Backtrack/Repeat	●		Reinforcing outlines
Cut holes in objects	Cut Hole	●		Cutting holes in objects
Fill holes in objects	Fill Holes	●		Filling holes in objects
Create feathered edges	Feather Edge	●		Creating feathered edges
Create gradient fill effects	Gradient Fill	●		Creating gradient fill effects
Create open stitching effects	Travel on Edge	●		Creating open stitching effects
Digitize appliqué	Appliqué	●		Digitizing appliqué
Editing Stitches				Editing Stitches
Select stitches		●		Selecting stitches
Insert stitches		●		Inserting stitches
Move stitches		●		Moving stitches
Split stitch blocks		●		Splitting stitch blocks
Delete stitches		●		Deleting stitches

Capabilities	Feature Name	EasyDesign	EasyEdit	Reference
Embroidery Lettering				Embroidery Lettering
Create lettering on-screen		●		Creating lettering on-screen
Make italic lettering		●		Making italic lettering
Create lettering with the Object Details dialog		●		Creating lettering with the Object Details dialog
Create horizontal orientations		●		Creating horizontal orientations
Create fixed-length horizontal orientations		●		Creating fixed-length horizontal orientations
Create vertical orientations		●		Creating vertical orientations
Create circular orientations		●		Creating circular orientations
Create custom orientations		●		Creating custom orientations
Adjust overall letter spacing on-screen		●		Adjusting overall letter spacing on-screen
Adjust individual letter spacing on-screen		●		Adjusting individual letter spacing on-screen
Adjust line spacing on-screen		●		Adjusting line spacing on-screen
Edit lettering objects		●		Editing lettering objects
Scale lettering		●		Scaling lettering
Transform lettering objects		●		Transforming lettering objects
Adjust orientations		●		Adjusting orientations
Change letter sequencing		●		Changing letter sequencing
Apply different stitch types to lettering objects		●		Applying different stitch types to lettering objects
Convert TrueType fonts to embroidery		●		Converting TrueType fonts to embroidery
Add special characters		●		Adding special characters
Add borders		●		Adding borders
Create special effects with Lettering Art		●		Creating special effects with Lettering Art
Create monogram designs		●		Creating monogram designs
Printing Designs				Printing Designs
Preview printouts		●	●	Previewing printouts
Set print options		●	●	Setting print options
Print embroidery elements		●	●	Printing embroidery elements
Print appliqué patterns		●	●	Printing appliqué patterns
Print color layers		●	●	Printing color layers
Reading and Writing Design Files				Reading and Writing Design Files
Open embroidery files in Digitizer EX		●	●	Opening embroidery files in Digitizer EX
Save designs for machine		●	●	Saving designs for machine

Capabilities	Feature Name	EasyDesign	EasyEdit	Reference
Send and write designs		●	●	Sending and writing designs
Send designs to machine		●	●	Sending designs to machine
Write designs to Flash Memory reader/writer		●	●	Writing to Flash Memory reader/writer
Design Management				Design Management
Open and view designs in Design Gallery	Design Gallery	●		Viewing designs in Design Gallery
Change locale		●		Changing locale
Display design thumbnails and summary information		●		Displaying design thumbnails and summary information
Select designs in folders		●		Selecting designs in folders
Open designs in EasyDesign		●		Opening designs in EasyDesign
Create new designs with custom templates		●		Creating new designs with custom templates
Sort files in folders		●		Sorting files in folders
Print designs and catalogs		●		Printing designs and catalogs
Convert design files in folders		●		Converting design files in folders
Rename, add and delete folders		●		Renaming, adding and deleting folders
Copy and paste designs		●		Copying and pasting designs
Cut and paste designs		●		Cutting and pasting designs
Rename designs in folders		●		Renaming designs in folders
Delete designs		●		Deleting designs

Appendix A

QUICK REFERENCE

Digitizer EX uses toolbars and shortcut keys to provide quick and easy access to the common commands and menu options. This section provides a list of all keyboard shortcuts available in EasyDesign and EasyEdit, as well as a description of the tools you will find in the toolbars. Unless otherwise stated, the keyboard shortcuts and tool descriptions apply to both EasyDesign and EasyEdit.

Keyboard shortcuts

To	Press
Create a new design (EasyDesign only)	[Ctrl] + [N]
Open an existing design	[Ctrl] + [O]
Save a design	[Ctrl] + [S]
Print a design	[Ctrl] + [P]
Exit an application	[Alt] + [F4]
Open the Color Chart	[Ctrl] + [R]
To	Press or Click
Choose Select tool	[O]
Select multiple objects	[Ctrl] + [Shift]
Select a range of objects	[Shift] + [Space]
	First and last objects
Select next object	[Tab]

To	Press
Select previous object	[Shift] + [Tab]
Add next object to selection	[Ctrl] + [Tab]
Add previous object to selection	[Ctrl] + [Shift] + [Tab]
Select all objects	[Ctrl] + [A]
Deselect all objects	[Esc] or [X]
Group selected objects	[Ctrl] + [G]
Ungroup selected objects	[Ctrl] + [U]
To	Press
Cut an object	[Ctrl] + [X]
Copy an object	[Ctrl] + [C]
Paste an object	[Ctrl] + [V]
Duplicate an object	[Ctrl] + [D]
Delete selected objects or last object	[Delete]

To	Press or Click	
Reshape object (EasyDesign only)	[H]	
Nudge selected object	[U] + [↑] [↓] [←] [→]	
To	Press	Or
Fit hoop to window	[1]	
Fit design to window	[0] (zero)	[F2]
Zoom into design	[Z]	
Zoom out of the design	[Shift] + [Z]	
Magnify area	[B]	
Center current stitch	[C]	[F6]
Return to previous view	[V]	[F5]
To	Press	
Delete the last reference point (EasyDesign only)	[← Bksp]	
Turn underlay on/off	[U]	
Display the Lettering Details dialog box (EasyDesign only)	[A]	
To	Press	
Undo a command	[Ctrl] + [Z]	
Redo a command	[Ctrl] + [Y]	
Cancel command	[Esc]	
To travel	Keyb'rd †	Keypad ‡
To start of design	[Home]	[7]
To end of design	[End]	[1]
To next color (EasyDesign only)	[PageDown]	[3]
To previous color (EasyDesign only)	[Page Up]	[9]
100 stitches forward (EasyEdit only)	[+]	
100 stitches backward (EasyEdit only)	[-]	

† Press Esc first ‡ Num Lock OFF

To travel	Keyb'rd †	Keypad ‡
10 stitches forward (EasyEdit only)	[↓]	[2]
10 stitches backward (EasyEdit only)	[↑]	[8]
1 stitch forward	[→]	[6]
1 stitch backward	[←]	[4]
† Press Esc first ‡ Num Lock OFF		
To	Press	
Show/hide images (EasyDesign only)	[D]	
Show/hide connectors	[Shift] + [C]	
Show/hide color chart	[Ctrl] + [R]	
Measure a distance on screen	[M]	
Redraw the screen	[R] or [F4]	
Redraw slowly	[Shift] + [R]	

Tools and toolbars

You can access commands using the toolbar buttons on the toolbars on your design window. To use a tool, simply move the mouse pointer over it, and click with the left mouse button. Depending on the application you are using, different tools appear on the toolbars. For example, the **View** toolbar in EasyEdit includes extra jumping buttons for moving through stitches, while EasyDesign provides the **Digitize** toolbar for creating new objects.

Standard toolbar

Tool	Description
	Click New to start a new design with the NORMAL template. EasyDesign only.
	Use Open to open an existing design.
	Use Save to save the current design.

Tool	Description
	Use Print to print a design using the current settings.
	Click Print Preview to preview the design printout on screen.
	Click Cut to cut selected objects to the clipboard.
	Click Copy to copy selected objects to the clipboard.
	Click Paste to paste copied objects in the design.
	Use Send to Machine to send a design to a machine for stitching.
	Use Write to Card to send a design to an ATA card.
	If EasyDesign or EasyEdit is already open, click Design Gallery to open Design Gallery.
	Use Undo to undo a command.
	Use Redo to reapply a command which has been 'undone'.
	Click Stop to cancel the function you are using or cancel all selections in a design.
	Click Switch to EasyEdit to close EasyDesign and switch to EasyEdit. EasyDesign only.
	Click Switch to EasyDesign to close EasyEdit and switch to EasyDesign. EasyEdit only.

Edit toolbar

Tool	Description
	Click Select and click an object to select it. Alternatively, drag a bounding box around the object to select.
	Click Polygon Select to select objects with a bounding box. Click to mark the selection area in the same way as you would digitize an object.
	Use Object Details to set details for selected objects or the current design as a whole. EasyDesign only.
	Click Reshape to display control points and stitch angle lines in selected objects. EasyDesign only.

Tool	Description
	Click Flip Along Horizontal to flip a selected object or design horizontally.
	Click Flip Along Vertical to flip a selected object or design vertically.
	Click Rotate CCW/CW to rotate a selected object or design by 45° clockwise. Right-click to rotate by 45° counter-clockwise.
	Click Align Left to left-align selected objects. EasyDesign only.
	Click Align Centers Vertically to vertically align centers of selected objects. EasyDesign only.
	Click Align Right to right-align selected objects. EasyDesign only.
	Click Align Top to align top of selected objects. EasyDesign only.
	Click Align Centers Horizontally to horizontally align centers selected objects. EasyDesign only.
	Click Align Bottom to align bottom of selected objects. EasyDesign only.
	Click Align Centers to align centers of selected objects. EasyDesign only.
	Click Feather Edge to apply feathering to selected objects. EasyDesign only.
	Use Underlay to apply automatic underlay to new or selected objects. EasyDesign only.
	Use Gradient Fill to vary stitch spacing between dense and open fill. EasyDesign only.
	Use Cut Hole to cut holes in selected objects. You cannot cut holes in Circle or Turning Angle Fill objects. EasyDesign only. EasyDesign only.
	Use Fill Holes to fill holes in selected objects. EasyDesign only.
	Use Backtrack to reinforce open outlines by double-stitching in reverse direction. EasyDesign only.
	Use Repeat to reinforce closed outlines by double-stitching in the same direction. EasyDesign only.
	Use Resequence to resequence selected objects by object or color. EasyDesign only.

Tool	Description
	Use Rotate Hoop 90° CCW / CW to rotate the hoop 90° in either direction.
	Use Stitch Mode to select individual stitches for editing. EasyEdit only.
	Use Split Block to split the design at a selected needlepoint.

Digitize toolbar

Tool	Description
	Use Parallel Fill to digitize filled shapes. EasyDesign only.
	Use Turning Angle Fill to create columns of varying width and stitch angle. EasyDesign only.
	Use Parallel Fill Rectangle to digitize filled rectangles. EasyDesign only.
	Use Parallel Fill Circle to digitize filled circles. EasyDesign only.
	Use Single Run Line to place a row of single or triple run stitches along a digitized line. EasyDesign only.
	Use Border to digitize columns or borders of fixed width. EasyDesign only.
	Use Appliqué to digitize appliqué objects. EasyDesign only.
	Click Current Color to open the Color Chart. Use it to change colors of selected objects or set the default color for new objects. EasyDesign only.
	Use Embroidery Gallery to insert a patterns (stamps) into designs. EasyDesign only.
	Use Image Preparation to reduce the number of colors and remove image 'noise' in non-outlined images. EasyDesign only.
	Use Outlined Image Preparation to sharpen outlines and reduce noise in outlined images. EasyDesign only.
	Use Click-to-Parallel Weave Fill to digitize large artwork shapes with Parallel Weave Fill, preserving any holes within. EasyDesign only.

Tool	Description
	Use Click-to-Parallel Weave Fill without Holes to digitize large artwork shapes with Parallel Weave Fill, ignoring any holes within. EasyDesign only.
	Use Click-to-Turning Angle Satin Fill to digitize narrow column artwork shapes with Satin stitch. EasyDesign only.
	Use Click-to-Centerline to digitize centerlines in artwork with run line stitches. EasyDesign only.
	Use Click-to-Outline to digitize boundaries of shapes with Run stitching using current properties. EasyDesign only.
	Use Match to Palette to find the nearest match between a selected image color and thread color. If not selected, the color is digitized in the current palette color. EasyDesign only.
	Use Click-to-Design Instantly to create embroidery designs directly from imported images using default settings. EasyDesign only.
	Use Click-to-Design Advanced for greater control when creating embroidery designs directly from imported images. EasyDesign only.
	Use Photo Click Instantly to create embroidery designs directly from photographs or other images using default settings. EasyDesign only.
	Use Photo Click Advanced for greater control when creating embroidery designs directly from photographs or other images. EasyDesign only.

Lettering toolbar

Tool	Description
	Click Monogramming to add monograms directly on-screen. EasyDesign only.
	Use Lettering to add embroidery lettering to designs or edit selected lettering. EasyDesign only.
	Use Insert Border to add borders to embroidery lettering and designs. EasyDesign only.

View toolbar

Tool	Description
	Click Zoom In to display a design at twice its current size.

Tool	Description
	Click Zoom Out to display a design at half its current size.
100	Click Zoom Box to zoom in on a section of a design.
	Click Vizualizer to change between normal view and Vizualizer view. EasyDesign only.
	Use Display Needle Points to show or hide the needle points in a design. EasyEdit only.
	Click Display Grid to hide or show the grid.
	Click Display Hoop to hide or show the hoop.
	Use Display Images to show and hide backdrops. EasyDesign only.
	Use Overview Window to toggle Overview window display on/off.
	Click Stitch Select While Traveling to select stitches while traveling. EasyEdit only.
	Click Back to travel back through the stitch sequence. This tool is only active when one of the jumping tools is selected.
	Click Forward to travel forwards through the stitch sequence. This tool is only active when one of the jumping tools is selected.
	Use Jump By 1 Stitch in conjunction with Forward and Back icons to travel by 1 stitch. EasyEdit only.
	Use Jump By 10 Stitches in conjunction with Forward and Back icons to travel by 10 stitch. EasyEdit only.
	Use Jump By 100 Stitches in conjunction with Forward and Back icons to travel by 100 stitch. EasyEdit only.
	Use Jump by Object in conjunction with Forward and Back icons to travel to the previous or next object. EasyDesign only.
	Use Jump by Color in conjunction with Forward and Back icons to travel to the previous or next color change.
	Use Jump to Start/End of Design in conjunction with Forward and Back icons to travel to the start or end of a design.

Tool	Description
	Use Slow Redraw to view the stitching and color sequence of a design in slow motion.

Design Gallery Standard toolbar

Tool	Description
	Click Open Design to open a selected design or designs in EasyDesign.
	Use Print to print design printouts for selected design(s).
	Use Convert to convert from one design file type to another.
	Click Folders to toggle the folder listing.
	Use to Change Design View to select thumbnails only, thumbnails with summary, or a detailed list only.

Appendix B

SUPPORTED FILES AND HOOPS

Details are provided here of the embroidery file types, and vector and bitmap formats supported by Digitizer EX as well as supported hoop types.



Supported embroidery file formats

There are two types of embroidery file formats:

- **Outline files:** Outline or 'condensed' files usually contain digitized shapes and lines, selected stitch types and stitch values and effects.
- **Stitch files:** Stitch files contain only stitches and machine functions and are suited to specific embroidery machines.

See also [Reading and Writing Design Files](#).

Supported file formats

Digitizer EX supports the following embroidery file formats:

Extension	Format	Read	Write
JAN	Janome Design	●	●
JAN	Janome Digitizer 10000 V2.0		●
JEF	Janome/Elna/Kenmore	●	●
JEF+	Janome/Elna/Kenmore	●	
JMT	Janome template	●	●
SEW	Janome/Elna/Kenmore	●	
CSD	POEM/Singer/ Huskygram EU	●	●
DST	Tajima	●	●
EMD	Elna	●	●
EXP	Melco	●	●

Extension	Format	Read	Write
HUS	Husqvarna/ Viking	●	●
PCM	Pfaff	●	●
PCS	Pfaff	●	●
PEC	Brother	●	●
PES	Brother	●	●
VIP	Husqvarna/Viking/Pfaff	●	●
VP3	Husqvarna/Viking/Pfaff	●	●
XXX	Singer	●	●

Supported vector and bitmap formats

Artwork can be imported into Digitizer EX in both vector and bitmap formats. Generally speaking, vector images preserve the picture quality when resized, whereas bitmap images cause problems of pixilation and image degradation when enlarged or scaled down. However, any scaling required should be done before importing into EasyDesign as the importing operation automatically transforms vector images into bitmaps. See [Digitizing with Backdrops](#) for details.

Supported vector formats

Digitizer EX supports the following vector formats:

Extension	Format	Read	Write
EMF	Enhanced Metafile	●	
EPS	Encapsulated PostScript	●	
WMF	Windows Metafile	●	

Supported bitmap formats

Digitizer EX supports the following bitmap formats:

Extension	Format	Read	Write
BMP	Windows Bitmap	●	●
JPG	JPEG File Interchange	●	●
PCX	ZSoft	●	●
PNG	Portable Network Graphics	●	

Supported hoop types

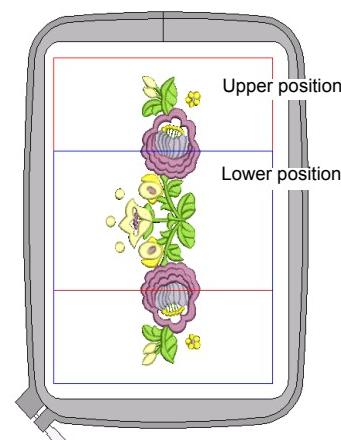
Digitizer EX supports a variety of hoop types used with the different machine models.



If you attempt to save a design in a hoop size not supported by the machine, Digitizer EX will prompt you to select a different hoop. If you attempt to send a design to machine with a hoop not supported by the machine, you will be prompted to select a different hoop. See also [Saving designs for machine](#).

MA Hoop support

Digitizer EX supports the MA Hoop. This is a two-position hoop which expands the available sewing area of the machine for which it is supplied. In the list of available hoops, the MA Hoop is identified as 'Hoop MA (200 x 280)'. The two sewing fields are shown in red and blue. When digitizing, each embroidery object must fit entirely into one or other hoop position. See [Sending designs with an MA Hoop](#) for details.



Sizes are shown in mm for a 1:1 display. At other display scales, values are scaled proportionally. The behavior of the MA hoop during loading and editing of embroidery designs is exactly the same as for a normal rectangular hoop of size 280 x 200.

The fact that there are two sewing fields has no effect until you save the design or send it to a machine.

Appendix C

PACKAGED FONTS

The table below includes all fonts that are standard with your Digitizer EX software. For best results when stitching, do not exceed the recommended maximum or minimum sizes. Recommended maximum and minimum heights refer to UPPER CASE letters. Some lower case letters – e.g. *a* and *c* – are about 70% the height of a capital letter. Thus you may need to make these characters larger than the recommended minimum.

Small, narrow letters may not require automatic underlay depending on size and fabric. If applied, the underlay may show outside the stitched columns. See also [Changing underlays](#).

You can create special characters in each font by holding down the **Alt** key on your keyboard and typing **0** (zero), its code, using the numbers on the keypad. For example, to type **é** with the code **234**, type **Alt + 0234**. The accented letter will appear when you release the **Alt** key. Note that not all characters are available in all fonts. See also [Adding special characters](#).

Standard fonts

Font	Sample	Recommended Sizes			
		Min in.	mm	Max in.	mm
2 Col Arial Shadow	A B C D E F a b c d e f 0 1 2 3 4 5 6 7 8 9	0.5	13	2.0	50
Adept	A B C D E F a b c d e f 0 1 2 3 4 5 6 7 8 9	0.27	7	1.8	45
Agatha	A B C D E F a b c d e f 0 1 2 3 4 5 6 7 8 9	0.3	8	2.0	50
Bauhaus	A B C D E F a b c d e f 0 1 2 3 4 5 6 7 8 9	0.4	10	2.0	50
Block1	A B C D E F a b c d e f 0 1 2 3 4 5 6 7 8 9	0.27	7	1.8	45
Book Border	A B C D E F 0 1 2 3 4 5 6 7 8 9	0.6	15	2.1	55
Bookcase	A B C D E F a b c d e f 0 1 2 3 4 5 6 7 8 9	0.25	6	2.0	50
Brassplate	A B C D E F ! # \$ % 0 1 2 3 4 5 6 7 8 9	0.25	6	1.2	30

Font	Sample	Recommended Sizes			
		Min in.	mm	Max in.	mm
Bravo	ABCDEF abcdef 0123456789	0.32	8	3.0	75
Brush	ABCDEF abcdef 0123456789	0.32	8	2.0	50
Cafe	ABCDEF abcdef 0123456789	0.25	6	2.0	50
Carla	ABCDEF abcdef 0123456789	0.4	10	2.0	50
Cecilia	ABCDEF abcdef 0123456789	0.4	10	1.4	35
Curly	ABCDEF abcdef 0123456789	0.6	15	2.9	75
Derbyshire	ABCDEF abcdef 0123456789	0.28	7	2.0	50
Drama	ABCDEF abcdef 0123456789	0.28	7	1.6	40
Elf	ABCDEF !@#\$% 0123456789	0.4	10	2.0	50
Fable	ABCDEF abcdef 0123456789	0.4	10	1.15	30

Font	Sample	Recommended Sizes			
		Min in.	mm	Max in.	mm
Firefly	A<small>B</small>C<small>D</small>E<small>F</small> abc<small>a</small>b<small>c</small>c<small>d</small>d<small>e</small>e<small>f</small>f 0<small>1</small>2<small>3</small>4<small>5</small>6<small>7</small>8<small>9</small>9	0.28	7	1.6	40
First Grade	A<small>B</small>C<small>D</small>E<small>F</small> abc<small>a</small>b<small>c</small>c<small>d</small>d<small>e</small>e<small>f</small>f 0<small>1</small>2<small>3</small>4<small>5</small>6<small>7</small>8<small>9</small>9	0.5	12	1.15	30
Gaelic	A<small>B</small>C<small>D</small>E<small>F</small> abc<small>a</small>b<small>c</small>c<small>d</small>d<small>e</small>e<small>f</small>f 0<small>1</small>2<small>3</small>4<small>5</small>6<small>7</small>8<small>9</small>9	0.44	11	2.0	50
Galant	A<small>B</small>C<small>D</small>E<small>F</small> abc<small>a</small>b<small>c</small>c<small>d</small>d<small>e</small>e<small>f</small>f 0<small>1</small>2<small>3</small>4<small>5</small>6<small>7</small>8<small>9</small>9	0.5	13	2.0	50
Gareth	A<small>B</small>C<small>D</small>E<small>F</small> abc<small>a</small>b<small>c</small>c<small>d</small>d<small>e</small>e<small>f</small>f 0<small>1</small>2<small>3</small>4<small>5</small>6<small>7</small>8<small>9</small>9	0.28	7	2.0	50
Gaslight	A<small>B</small>C<small>D</small>E<small>F</small> abc<small>a</small>b<small>c</small>c<small>d</small>d<small>e</small>e<small>f</small>f 0<small>1</small>2<small>3</small>4<small>5</small>6<small>7</small>8<small>9</small>9	0.25	6	2.4	60
Heidi	A<small>B</small>C<small>D</small>E<small>F</small> abc<small>a</small>b<small>c</small>c<small>d</small>d<small>e</small>e<small>f</small>f 0<small>1</small>2<small>3</small>4<small>5</small>6<small>7</small>8<small>9</small>9	0.4	10	2.0	50
Hana	A<small>B</small>C<small>D</small>E<small>F</small> abc<small>a</small>b<small>c</small>c<small>d</small>d<small>e</small>e<small>f</small>f 0<small>1</small>2<small>3</small>4<small>5</small>6<small>7</small>8<small>9</small>9	1.5	13	2.0	50
Hollowblock	A<small>B</small>C<small>D</small>E<small>F</small> !%"\$%&" A<small>E</small>C<small>E</small>I<small>D</small>N	0.4	10	2.4	60

Font	Sample	Recommended Sizes			
		Min in.	mm	Max in.	mm
Honeypot	A B C D E F abcdef 0 1 2 3 4 5 6 7 8 9	0.32	8	1.2	30
Jonathan	A B C D E F abcdef 0 1 2 3 4 5 6 7 8 9	0.28	7	1.8	45
Jupiter	A B C D E F abcdef 0 1 2 3 4 5 6 7 8 9	0.25	6	1.2	30
Kudos	A B C D E F abcdef 0 1 2 3 4 5 6 7 8 9	0.27	7	1.2	30
Liberty	A B C D E F abcdef 0 1 2 3 4 5 6 7 8 9	0.28	7	2.0	50
Lucky	A B C D E F abcdef 0 1 2 3 4 5 6 7 8 9	0.28	7	1.4	35
Maestro	A B C D E F abcdef 0 1 2 3 4 5 6 7 8 9	0.4	10	1.6	40
Nation	A B C D E F abcdef 0 1 2 3 4 5 6 7 8 9	0.32	8	2.7	70
Natural	A B C D E F abcdef 0 1 2 3 4 5 6 7 8 9	0.5	13	3.0	75
Nordic	A B C D E F abcdef 0 1 2 3 4 5 6 7 8 9	0.35	9	2.0	50

Font	Sample	Recommended Sizes			
		Min in.	mm	Max in.	mm
Old English	A B C D E F a b c d e f 0 1 2 3 4 5 6 7 8 9	0.3	8	2.0	50
Olivia	A B C D E F a b c d e f 0 1 2 3 4 5 6 7 8 9	0.3	7	1.6	40
Orient	A B C D E F 0 1 2 3 4 5 6 7 8 9	0.32	8	2.0	50
Pageant	Φ Θ Φ Φ Φ Ο Ι Ρ Σ Τ Σ Σ	0.4	10	3.0	75
Puppet	A B C D E F a b c d e f 0 1 2 3 4 5 6 7 8 9	0.28	7	1.6	40
Radio	A B C D E F a b c d e f Ο Ι Ρ Σ Τ Σ Σ Σ	0.4	10	2.5	65
Register	A B C D E F a b c d e f 0 1 2 3 4 5 6 7 8 9	0.25	6	1.2	30
Royale	A B C D E F a b c d e f 0 1 2 3 4 5 6 7 8 9	0.5	13	2.4	60
Serif2	A B C D E F a b c d e f 0 1 2 3 4 5 6 7 8 9	0.3	8	1.2	30

Font	Sample	Recommended Sizes			
		Min in.	mm	Max in.	mm
Sprite	ABCDEFGHIJKLMN 0123456789	0.31	8	1.2	30
Student	ABCDEFGHIJKLMN 0123456789	0.35	9	2.1	55
Student Border Run	ABCDEFGHIJKLMN 0123456789	1.0	25	3.0	75
Swiss Condensed	ABCDEFGHIJKLMN 0123456789	0.28	7	2.0	50
Swiss Modern	ABCDEFGHIJKLMN 0123456789	0.32	8	1.8	45
Techno	ABCDEFGHIJKLMN 0123456789	0.32	8	1.8	45
Times	ABCDEFGHIJKLMN 0123456789	0.4	10	1.8	45
Tourist	ABCDEFGHIJKLMN 0123456789	0.28	7	1.6	40
Typist	ABCDEFGHIJKLMN 0123456789	0.5	13	2.0	50

Font	Sample	Recommended Sizes			
		Min in.	mm	Max in.	mm
Wild West		0.4	10	1.8	45

Monogramming fonts

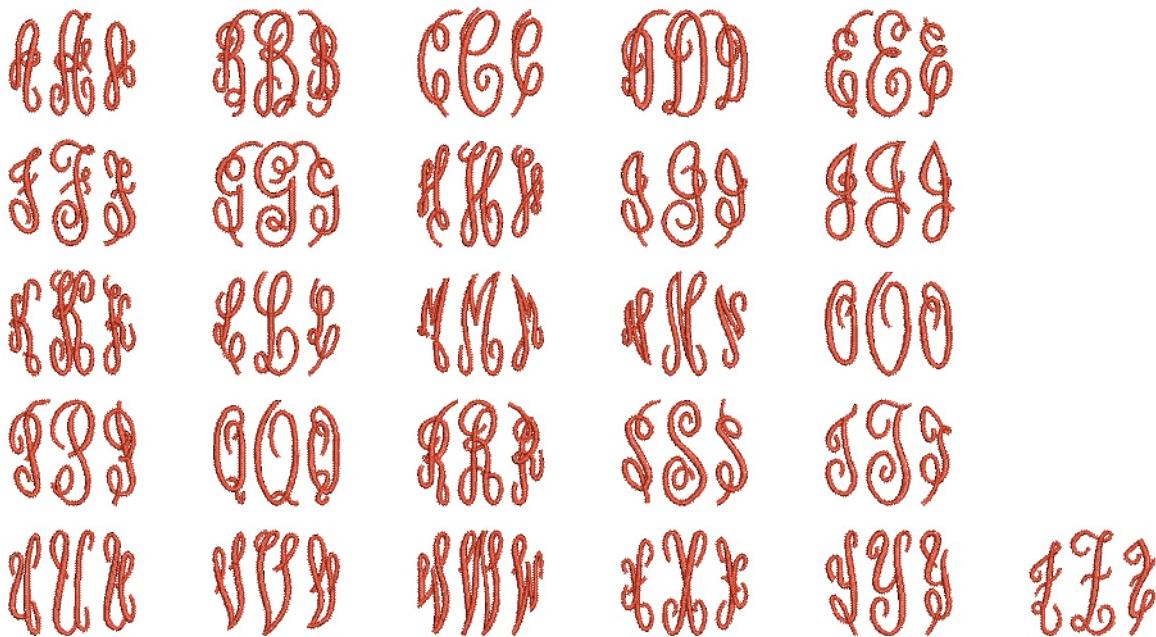
Digitizer EX contains four Monogram Alphabets – Fancy Monogram, Octagon Monogram, Point Monogram and Seal Monogram. Monogram alphabets provide three sets of the upper-case alpha characters. The first, known as the 'left set', is designed to appear on the left side of a monogram. The second, or 'middle set', is designed for the middle position(s) of a monogram. The 'right set' is designed to appear on the right side of a monogram. Each set is mapped to a specific set of character equivalents in the alphabet.

Letter	A	B	C	D	E	F	G	H	I	J	K	L	M
Left	!	"	#	\$	%	&	'	()	*	+	,	-
Middle	A	B	C	D	E	F	G	H	I	J	K	L	M
Right	a	b	c	d	e	f	g	h	i	j	k	l	m

Letter	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Left	.	/	0	1	2	3	4	5	6	7	8	9	:
Middle	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Right	n	o	p	q	r	s	t	u	v	w	x	y	z

Fancy Monogram

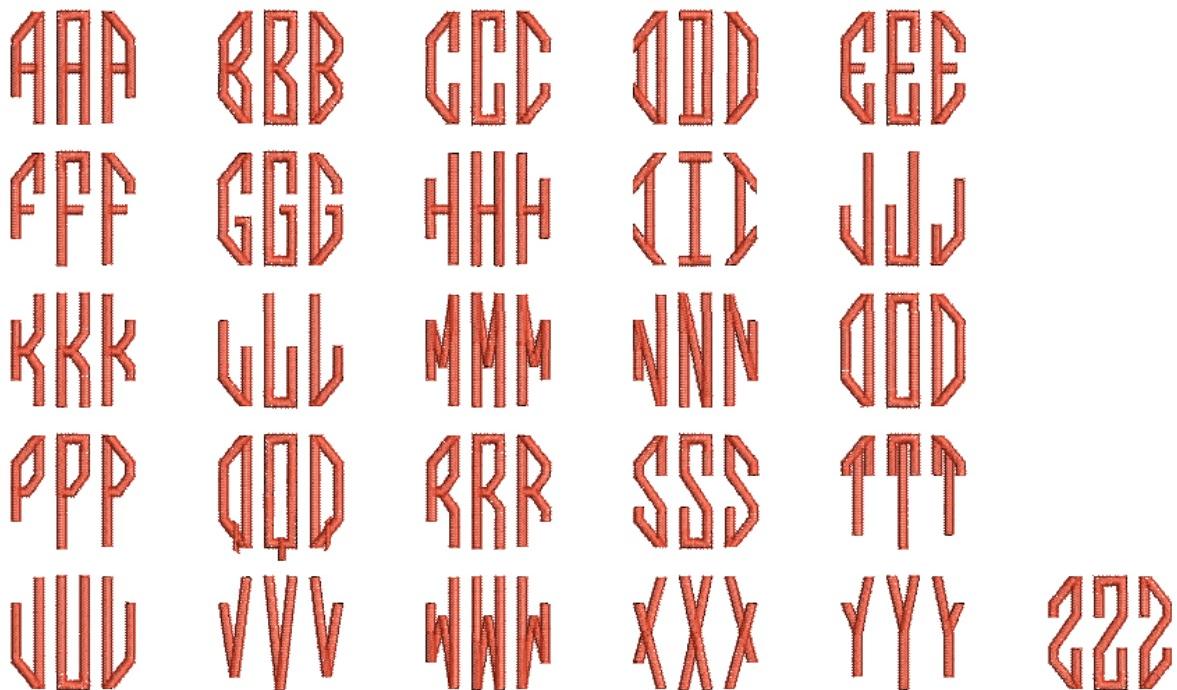
Fancy Monogram is a special monogramming alphabet using three sets of the upper-case alpha characters.



Alphabet contains	Left, Center and Right letters for 3-letter monogram. Use symbols for the left letter, upper case for the center letter, and lower case for the right letter.		
Colors	1 color		
Stitching	Satin		
Recommended letter height	Minimum	1.0 in	25 mm
	Maximum	4.0 in	100 mm

Octagon Monogram

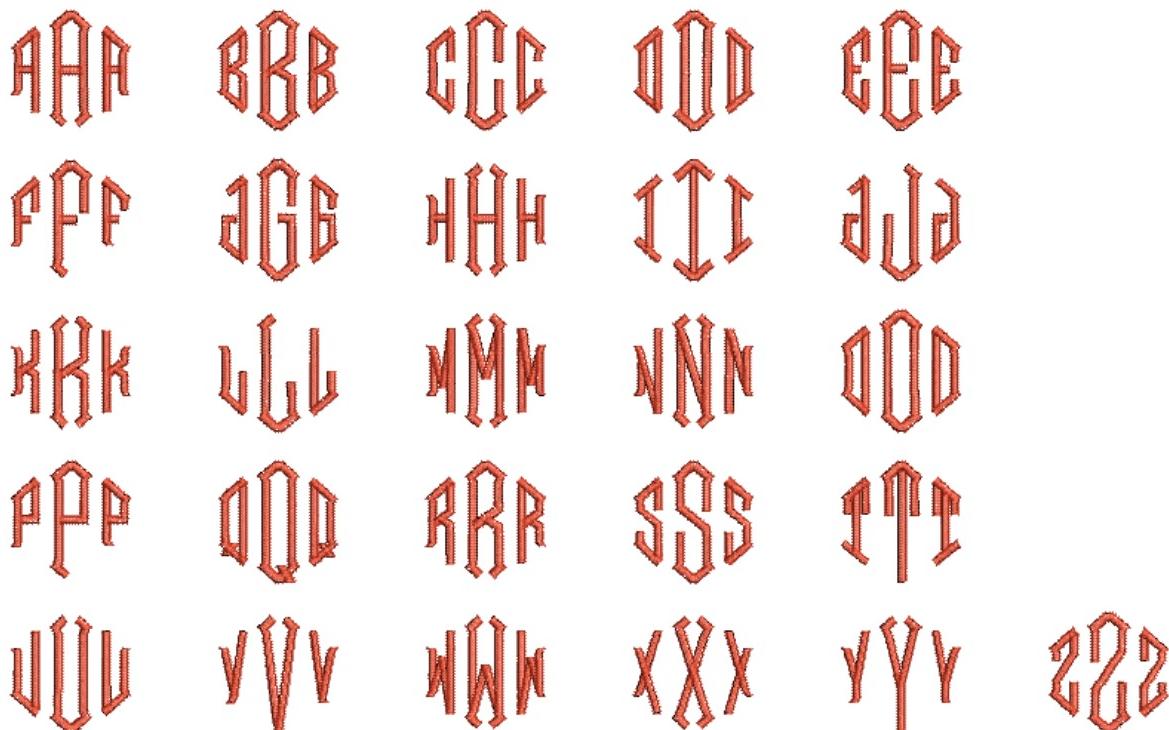
Octagon Monogram is a special monogramming alphabet using three sets of the upper-case alpha characters.



Alphabet contains	Left, Center and Right letters for 3-letter monogram. Use symbols for the left letter, upper case for the center letter, and lower case for the right letter.		
Colors	1 color		
Stitching	Satin		
Recommended letter height	Minimum	0.7 in	18 mm
	Maximum	4.0 in	100 mm

Point Monogram

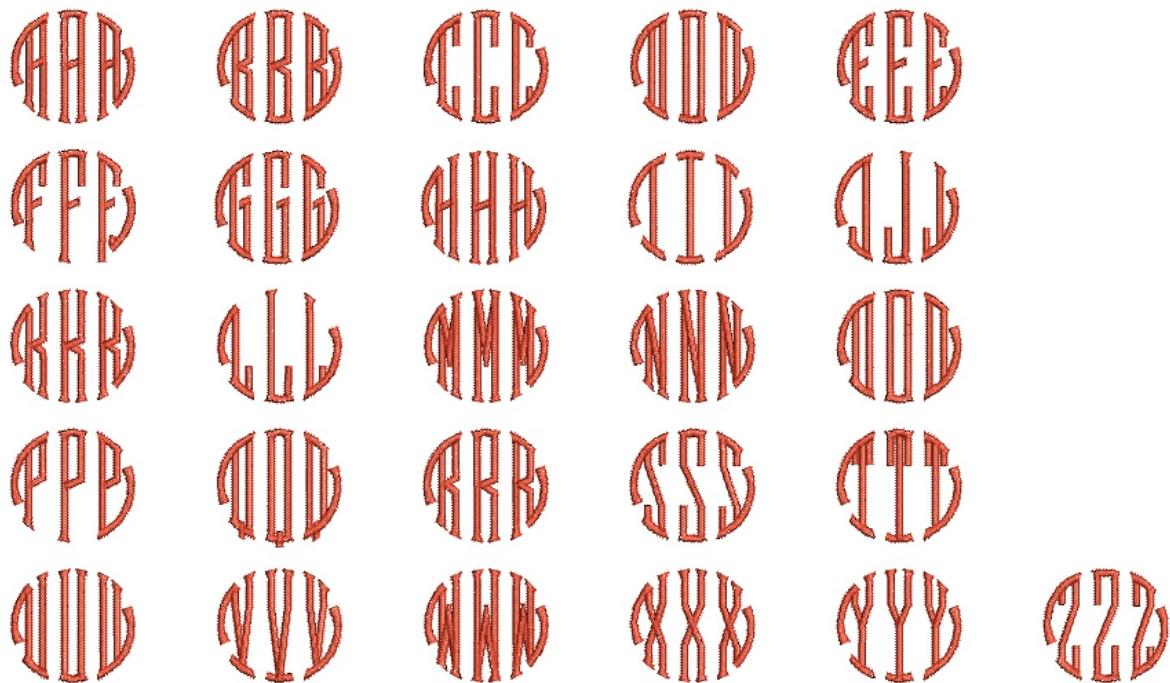
Point Monogram is a special monogramming alphabet using three sets of the upper-case alpha characters.



Alphabet contains	Left, Center and Right letters for 3-letter monogram. Use symbols for the left letter, upper case for the center letter, and lower case for the right letter.		
Colors	1 color		
Stitching	Satin		
Recommended letter height	Minimum	0.7 in	18 mm
	Maximum	4.0 in	100 mm

Seal Monogram

Seal Monogram is a special monogramming alphabet using three sets of the upper-case alpha characters.



Alphabet contains	Left, Center and Right letters for 3-letter monogram. Use symbols for the left letter, upper case for the center letter, and lower case for the right letter.		
Colors	1 color		
Stitching	Satin		
Recommended letter height	Minimum	0.7 in	18 mm
	Maximum	4.0 in	100 mm

Appendix D

STAMPS, MOTIFS AND BORDER SAMPLES

Embroidery Stamps are ready-made design elements. They generally consist of one or more simple objects made up of Run and/or Satin stitches. You use Embroidery Stamps on their own as decorative elements. Digitizer EX also provides a library of embroidery motifs which can be linked together to create ornamental runs and fills. As well as ready-made Embroidery Stamps, Digitizer EX also provides ready-made borders and decorative 'accents' for use in designs, particularly monograms.

This section contains samples of the stamps, borders and monogram accents available in Digitizer EX. Use these tables to see what a particular item looks like. The stamps are designed to be added as decorative items and are not intended to be greatly enlarged. Do not exceed the recommended maximum size for each stamp as shown in the table. The table also includes its original size. If it has changed for any reason, you can revert to the original settings using the values in these tables.

Stamps and motifs

Embroidery Stamps and Motifs are ready-made design elements, such as hearts, leaves or geometric patterns. Use them to create decorative effects in your designs. Rotate, scale, or mirror them as you add them or edit them like any other object. See [Embroidery Stamps and Motifs](#) for details.

Stamp	Size			
	mm	% of original	Min	Max
Scroll04	11.5	6.2		
				
Scroll05	10.0	10.0		
				
† to fit hoop				

Stamp	Size				
	mm		% of original		
	W	H	Min	Max	
Shape05					
	11.0	11.0			
Shape35					
	5.3	8.5			
Shape41					
	13.4	14.6			
001					
	22.7	12.8			
002					
	9.8	8.8			
003					
	23.4	9.3			
004					
	17	10.7			
005					
	18.2	7.7			
006					
	30.7	9.5			
007					
	19.4	7.7			
009					
	13.8	10.4			
010					
	9.6	9.9			
† to fit hoop					

Stamp	Size				
	mm		% of original		
	W	H	Min	Max	
012					
	10.4	10.2			
014					
	19.5	9.5			
015					
	26.4	9.5			
016					
	21.4	10.4			
Antiq1					
	79	47	100	†	
Antiq2					
	90	40	100	†	
Bar1					
	77	9	100	†	
Bar2					
	51	9	100	†	
Bar3					
	36	11	100	†	
Bdr1					
	36	11	100	†	
† to fit hoop					

Stamp	Size				
	mm		% of original		
	W	H	Min	Max	
Bdr2					†
	53	52	100		†
Bdr3					†
	72	52	100		†
Bdr4					
	40	40	60	150	
Check					
	21	15	50	140	
Des1					
	29.9	8.5			
Des2					
	31	21.8			
Des3					
	30	24.2			
Des4					
	30.2	18.5			
Des5					
	30.1	12			
† to fit hoop					

Stamp	Size				
	mm		% of original		
	W	H	Min	Max	
Des6					
	44	25.9			
Des7					
	15.4	20.9			
Des8					
	27.9	12.4			
Des9					
	31.8	17.3			
Des10					
	30	11			
Des11					
	28.7	4.7			
Des12					
	27.7	9.9			
Des13					
	15.7	15.7			
Des14					
	30.7	14.5			
Des15					
	30.2	13.2			
Des16					
	30.3	13.6			
† to fit hoop					

Stamp	Size				
	mm		% of original		
	W	H	Min	Max	
Des17					
	30.1	9.1			
Des18					
	30.3	12.5			
Des19					
	30.5	10.8			
Des20					
	36.5	25.3			
Des21					
	20.1	14			
Des22					
	10.4	9.9			
Des23					
	29.1	20.7			
Des24					
	30.2	9.0			
Des25					
	15.8	25.5			
Des001					
	9.8	2.4			
Des002					
*	6.9	6.2			
Des003					
	9.9	6.5			
† to fit hoop					

Stamp	Size				
	mm		% of original		
	W	H	Min	Max	
Des004					
>	5.0	5.8			
Des005					
X	6.3	9.3			
Des006					
O	8.0	5.5			
Des007					
.	8.0	5.3			
Des008					
o	18.5	10.8			
Des009					
o	17.9	7.3			
Des010					
T	4.8	4.3			
Des011					
>	5.9	8.0			
Des012					
X	5.9	6.2			
Des013					
◊	5.0	11.4			
Des014					
◇	10	5.2			
Des015					
O	9.5	9.7			
Dog1					
	20	18	85	500	
† to fit hoop					

Stamp	Size				
	mm		% of original		
	W	H	Min	Max	
Flora1					
	25	16	100	†	
Flora2					
	26	28	100	†	
Flora3					
	25	18	100	†	
Flora4					
	25	26	100	†	
Flora5					
	25	20	100	†	
Floral1					
	47	55	100	†	
Floral2					
	40	41	100	†	
Flrsh1					
	34	10	100	†	
Flrsh2					
	49	15	100	200	
† to fit hoop					

Stamp	Size				
	mm		% of original		
	W	H	Min	Max	
Flrsh3					
	40	17	100	200	
Flrsh4					
	37	14	100	†	
FLrsh5					
	40	13	100	†	
Flrsh6					
	41	17	100	†	
Flrsh7					
	30	19	80	200	
Flrsh8					
	36	19	100	200	
Flower1					
	47	32	50	250	
Kitch1					
	25	12	100	†	
Kitch2					
	24	17	100	†	
Kitch3					
	27	28	100	†	
† to fit hoop					

Stamp	Size				
	mm		% of original		
	W	H	Min	Max	
Kitch4					
	25	17	100	†	
Kitch5					
	25	26	100	†	
Laurel					
	46	30	80	†	
Leaf1					
	43	46	35	200	
Leaf2					
	20	20	50	350	
Motif1					
	4	4	100	†	
Motif2					
	4	4	100	†	
Motif3					
	4	4	100	†	
Motif4					
	4	4	100	†	
Motif5					
	4	4	100	†	
† to fit hoop					

Stamp	Size				
	mm		% of original		
	W	H	Min	Max	
Motif6					
	4	4	100	†	
Motif7					
	4	4	100	†	
Motif8					
	4	4	100	†	
Motif9					
	4	4	100	†	
Motif10					
	4	4	100	†	
Motif11					
	4	4	100	†	
Motif12					
	4	4	100	300	
Motif13					
	4	3	100	400	
Motif14					
	4	3	100	†	
Motif15					
	4	3	100	†	
Motif16					
	3	5	100	†	
Motif17					
	3	5	100	†	
Motif18					
	2	3	100	†	
† to fit hoop					

Stamp	Size				
	mm		% of original		
Stamp	W	H	Min	Max	
Motif19 	2	3	100	†	
Motif20 	3	3	100	†	
Motif21 	4	4	100	†	
Motif22 	4	4	100	†	
Motif23 	6	5	100	200	
Motif24 	2	3	100	800	
Motif25 	4	3	100	†	
Motif26 	4	4	100	†	
Motif27 	5	4	100	†	
Motif28 	4	4	100	†	
Motif29 	4	4	100	†	
Motif30 	4	4	100	†	
Motif31 	4	4	100	†	
† to fit hoop					

Stamp	Size				
	mm		% of original		
Stamp	W	H	Min	Max	
Motif32 	7	4	100	†	
Motif33 	6	5	100	200	
Motif34 	6	3	100	350	
Motif35 	6	4	100	†	
Motif36 	8	4	100	900	
Motif37 	7	6	100	350	
Motif38 	10	7	100	†	
Motif39 	6	6	100	200	
Motif40 	8	4	100	†	
Ornam1 	40	52	100	†	
Ornam2 	22	41	100	†	
Ornam3 	8	40	100	†	
† to fit hoop					

Stamp	Size				
	mm		% of original		
	W	H	Min	Max	
Ornam4					
		40	42	100	†
Ornam5					
		67	41	80	†
Ornam6					
		30	15	90	†
Ornam7					
		52	14	50	300
Ornam8					
		23	10	60	420
Ornam9					
		31	12	60	475
Scroll1					
		64	19	80	†
Scroll2					
		95	25	80	†
Scroll3					
		65	34	80	†
Scroll4					
		66	24	80	†
Tulip1					
		34	14	80	180
† to fit hoop					

Blackwork motifs

Blackwork gets its name from the black silk thread traditionally used in this form of embroidery. Use the special **Blackwork Fill** pattern set to create interesting scrolling or geometric patterns. See [Adjusting motif fill settings](#) for details.

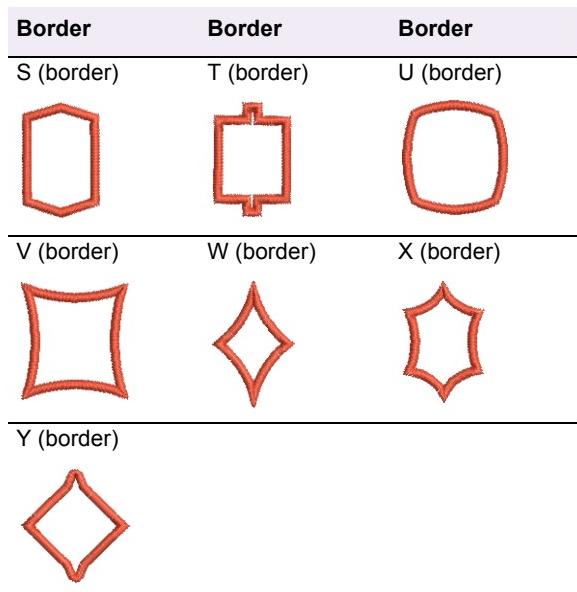
Motif	Size mm	Motif	Size mm		
	W	H	W		
	12.1	10.1		10	5
	10	5		2	2
	43	25		28	31
	22	7		20	22
	23	14		14	16
	14	11		14	22
	21	63		18	62
	32	36		28	22

Motif	Size mm		Motif	Size mm	
	W	H		W	H
NBW13			NBW14		
	14	16		62	26
NBW15			NBW16		
	22	23		36	26
NBW17			NBW18		
	47	65		36	63
NBW19			NBW20		
	11	11		20	20
NBW21			Star5		
	22	22	*	4	4
DES008			Flora1		
	18	11		25	16
Flora4			Kite01		
	25	26		14	14
Cross02			Cross06		
	5	5		12	12
Cross08			Cross10		
	8	8		7	7
Curve16					
	8	28			

Borders

Add decorative borders such as rectangles, ovals, and shields to monograms and designs using the ready-made border designs. Borders are automatically sized to fit the current design. Adjust border thickness and size as required. See [Adding borders](#) for details.

Border	Border	Border
A (border)	B (border)	C (border)
D (border)	E (border)	F (border)
G (border)	H (border)	I (border)
J (border)	K (border)	L (border)
M (border)	N (border)	O (border)
P (border)	Q (border)	R (border)



Monogram accents

Add ornamental decorations to designs in the same way as you insert embroidery designs. Adjust the position and size as required. See [Adding monogram accents](#) for details.

Accent	Size mm		Accent	Size mm	
	W	H		W	H
Accent1			Accent2		
	16	59		74	38
Accent3			Accent4		
	34	45		54	57
Accent5			Accent6		
	51	13		5	33
Accent7			Accent8		
	40	64		56	59
Accent9			Accent10		
	70	31		55	49
Accent11			Accent12		
	44	44		49	45
Accent13			Accent14		
	52	54		69	48
Accent15			Accent16		
	44	47		27	29
Accent17			Accent18		
	29	44		35	8
Accent19			Accent20		
	50	19		23	32
Accent21			Accent22		
	19	41		42	15
Accent23					
	55	16			

Appendix E

EMBOSSED FILL SAMPLES

This section contains samples of the Embossed Fill patterns available in Digitizer EX. Use the table to see what a particular Embossed Fill looks like. The table also includes the stitch angle. If they have changed for any reason, revert to the original settings using the value in this table. See [Creating Embossed fills](#) for details.

Number	Embossed Fill	Stitch Angle	Number	Embossed Fill	Stitch Angle
Arrow1		15°	Blossom4		15°
Arrow2		15°	Blossom5		15°
Arrow3		15°	Blossom6		15°
Basket		15°	Brick		45°
Blossom1		15°	Chain		45°
Blossom2		15°	Chevron1		15°
Blossom3		15°	Chevron2		15°

Number	Embossed Fill	Stitch Angle	Number	Embossed Fill	Stitch Angle
Chevron3		90°	Diamonds1		15°
Chevron4		15°	Diamonds2		15°
Chevron5		15°	Diamonds3		15°
Chevron6		90°	Diamonds4		15°
Circle1		15°	Diamonds5		15°
Circle2		15°	Diamonds6		90°
Circle3		90°	Diamonds7		45°
Circle4		45°	Diamonds8		15°
Circle5		15°	Diamonds9		15°
Circle6		15°	Doughnut1		15°
Circle7		10°	Doughnut2		15°
Clubs		90°	Doughnut3		15°
Crazypave		15°	Feather1		15°
			Feather2		90°

Number	Embossed Fill	Stitch Angle	Number	Embossed Fill	Stitch Angle
Feather3		15°	Patch1		45°
Hearts1		90°	Patch2		45°
Hearts2		15°	Patch3		45°
Hearts3		15°	Patch4		8°
Hearts4		90°	Patch5		8°
Hearts5		10°	Patch6		7°
Knot1		15°	Patch7		8°
Knot2		180°	Rectangle1		45°
Knot3		15°	Rectangle2		30°
Oval1		15°	Saturn		15°
Oval2		15°	Snail		15°
Oval3		90°	Spades		90°
Oval4		10°	Splash1		0°
Oval5		10°	Splash2		90°

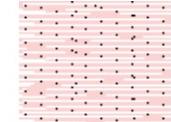
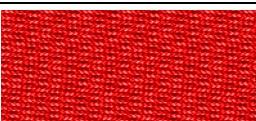
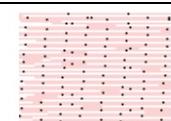
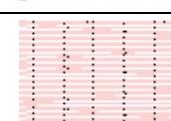
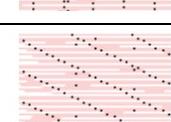
Number	Embossed Fill	Stitch Angle	Number	Embossed Fill	Stitch Angle
Splash3		10°	Target1		15°
Square1		45°	Target2		15°
Square2		15°	Target3		8°
SquarePatch		15°	Tiles1		15°
Squigle1		15°	Tiles2		15°
Squigle2		90°	Tiles3		15°
Squigle3		15°	Tiles4		15°
Star12pnt		15°	Tiles5		15°
Star3pnt		15°	Triangle1		15°
Star4pnt1		15°	Triangle2		15°
Star4pnt2		15°	Triangle3		15°
Star5pnt		15°	Triangle4		15°
Star6pnt		15°	Triangle5		45°
Star7pnt		15°	Triangle6		15°

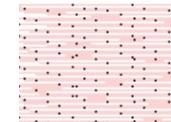
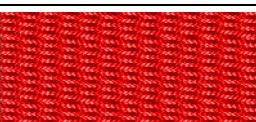
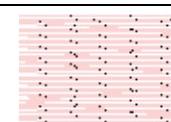
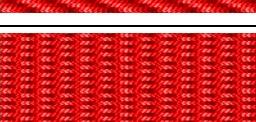
Number	Embossed Fill	Stitch Angle
Triangle7		15°
Triangle8		15°
Triangle9		15°
Ziggy1		15°
Ziggy2		15°
Ziggy3		15°
Ziggy4		15°
Ziggy5		15°

Appendix F

WEAVE FILL SAMPLES

The patterns shown in this appendix are a part of your Digitizer EX program. Make sure you apply the correct stitch angle to each pattern. The following samples have been digitized with a stitch angle of 0°. Experiment with different stitch angles to get new effects. See [Creating Weave fills](#) for details.

No	Stitch sample	Needle point preview
1		
2		
3		
4		

No	Stitch sample	Needle point preview
5		
6		
7		
8		

No	Stitch sample	Needle point preview	No	Stitch sample	Needle point preview
9			18		
10			19		
11			20		
12			21		
13			22		
14			23		
15			24		
16			25		
17					

Appendix G

TROUBLESHOOTING

This section provides help for solving problems in Digitizer EX. It includes procedures for checking your system's requirements and settings, reverting to original values, and testing disks and connections. It also lists causes for common error messages and problems.

Solving problems in Digitizer EX

If you encounter a problem, refer to the following references for help:

- Digitizer EX User Manual – select Help > Online Manual (or printed version)
- Digitizer EX Online Help – select Help > Help Topics
- Windows Online Help – select Start > Help
- Windows manual
- Documentation supplied with your hardware.

Getting help

If you are unable to solve a problem, you should contact your Digitizer EX reseller. Before seeking help, check that your PC meets the system requirements, and check the [Security device messages](#) in this chapter.

Checking CPU/RAM specifications

Check your CPU and RAM specifications, and the version of Windows you are running to ensure they meet Digitizer EX requirements. See [Minimum requirements for Digitizer EX](#) for details.

To check CPU/RAM specifications

- 1 On the Windows desktop, right-click the **My Computer** icon and select **Properties**.
The **System Properties** > **General** dialog opens.
- 2 Check the Windows version, the CPU and the amount of RAM.

Checking your hard disk space

Check that your hard disk has enough space to run Digitizer EX effectively. See [Checking CPU/RAM specifications](#) for details.

To check your hard disk space

- 1 Double-click the **My Computer** icon on your Windows Desktop.
The **My Computer** window opens.
- 2 Right-click the hard-disk drive icon (usually C:) and select **Properties**.
The **Properties** > **General** dialog opens.
This tab shows the hard-disk capacity as well as any free space. This must be greater than 100 MB or 10% of your total hard drive space, whichever is the greater amount.

Unrecoverable errors

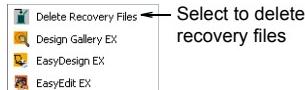
Problem	The system fails and displays 'unrecoverable' error.
Cause	The design you tried to open is corrupt.
Suggestion	Delete any files in the C:\Program Files\Digitizer\Recover folder using Windows Explorer.

Delete recovery files

On rare occasions when Digitizer EX crashes, it may cause files to corrupt. This may destabilize the program when you next try to run it. Use the **Delete Recovery Files** option in the **Start > Programs** menu. This allows you to delete corrupt files.

To delete recovery files

- 1 Close EasyDesign.
- 2 On the Windows taskbar, click the **Start** button and select **Programs > Digitizer EX > Delete Recovery Files**.



The **Purge Recovery and Backup Directories** dialog opens.



Try this! To delete backup files as well, select **Delete Backup files**.

- 3 Click **OK**.
If some files cannot be deleted, a message will display. Using Windows Explorer, delete any remaining files from the C:\Program Files\Digitizer\Recover and C:\Program Files\Digitizer\Backup folders.

Security device messages

This section describes the messages related to the security device. Most security device messages are caused by incorrect connection, access codes,

interference or conflict from another hardware device on the PC. To prevent security device errors, enter all access codes as soon as you receive them. If you skip any access codes, features may become unavailable, or Digitizer EX may stop working altogether.



Try this! After entering new codes, exit Digitizer EX and then restart.

Security device not found (dongle)

Message	Security device not found
Cause	Software is unable to detect dongle or there is a conflict with another device on your PC.
Suggestion	Log on to the machine web site. Please contact your machine reseller for further assistance.

Design dimensions

Problem	Dimensions of design are incorrect.
Cause	If the design's dimensions are too large or too small, the system units of measurement may be set incorrectly. The units of measurement are set in Windows Regional settings.
Suggestion	Change the units of measurement in Windows. Select Start > Settings > Control Panel > Regional Settings.

Colors change in Visualizer

Problem	When the design is displayed in Vizualizer the color of some of the objects change.
Cause	In Vizualizer, the colors are limited to those available on the embroidery machine. If your design has more colors than are available on your machine, the colors will 'wrap around' back to color 1.
Suggestion	Switch to normal view to see the actual colors of your design.

Missing toolbar buttons

Problem	Buttons missing from toolbars
---------	-------------------------------

Cause	Screen resolution is set too low.
Suggestion	Change the screen resolution to 1024x768 or higher.

Control points missing

Problem	The control points on selected objects are missing in systems updated to V1.0 from a previous version. This problem may be accompanied by 'Exception Access Violation Error' messages followed by a system crash.
Cause	This problem is related to the video card and occurs more on newer and 3D video cards than older ones.
Suggestion	Download and install the latest software driver from the video card manufacturer's Internet website. These are normally free from the provider. Some websites to try include: <ul style="list-style-type: none"> ◆ http://www.nvidia.com/ ◆ http://www.ati.com/ ◆ http://www.s3.com/ ◆ http://www.matrox.com/ ◆ http://www.trid.com/ ◆ http://www.tseng.com/ ◆ http://www.diamondmm.com/ ◆ http://www.sis.com/ ◆ http://www.cirrus.com/ Other sites that provide drivers or links to other sites are: <ul style="list-style-type: none"> ◆ http://www.download.com/ ◆ http://www.tucows.com/ ◆ http://www.windrivers.com/

Problem recovering design files from backup folder

Problem	You can't see the backup design – e.g. DesignName.BAK – in the backup folder.
---------	---

Cause	If you have the Digitizer EX 'Auto Save' option enabled, backups of JAN design files will be saved to the C:\Program Files\Digitizer\Backup folder. This is a basic way of backing up your files.
Suggestion	Start Windows Explorer and browse to the C:\Program Files\Digitizer\Backup folder. Select the file and select File > Rename. Change the file extension to JAN – e.g. DesignName.JAN – and press Enter. Move the JAN file to your C:\Embroidery Gallery folder. You can now open the file normally in Digitizer EX. Note: If you cannot see the file extension BAK, you need to change your view settings in Windows Explorer.

Problem recovering design files from recover folder

Problem	You want to use recovery files.
Cause	Your software crashes due to a hardware or software failure, recovery files usually created.
Suggestion	Start Digitizer EX. Select File > Open from the top of your Digitizer EX screen. Navigate to the C:\Program Files\Digitizer\Recover directory, using the Look in: dropdown menu. Select All Files (*.*) from the Files of type: dropdown menu. Select and open the recovery file you want from the list – it will have EMA as the last part of its name – and check that it is the one you want. Re-name it with the JAN extension in the C:\Embroidery Gallery folder (or another of your choice).

GLOSSARY

Active window: The active window is one to which the next command or action will apply. If a window is 'active', its title bar changes color to differentiate it visually from other open windows.

All-over: Continuous embroidery which covers all of the goods from selvage to selvage.

Anti-aliasing: A software technique similar to dithering which is used to soften hard outlines where color blocks intersect. It produces smoother outlines by 'blurring' the pixels where colors join.

Auto Center: Auto Center automatically centers the start and end points of a design.

Automatic color change: Ability of multi-needle embroidery machine to follow a command to change to a specified needle with a different thread color.

Automatic pull compensation: Embroidery stitches pull the fabric inwards where the needle penetrates. This can cause the fabric to pucker, and gaps to appear in the embroidery. Automatic pull compensation counters this effect by 'overstitching' outlines of filled shapes on the sides where the needle penetrates. This means the design can be optimized for different fabrics. See also [Pull compensation](#).

Back appliquéd: A fabric piece used behind a design where the front fabric will be cut away to reveal the fabric beneath it.

Backing: See [Stabilizer](#).

Backup: The copying of files onto floppy disk or other storage media in order to duplicate and secure data. Usually two copies are made and kept separately.

Blending: See [Color Blending](#).

Bobbin: Spool or reel that holds the bobbin thread, which helps form stitches on the underside of the fabric.

Bobbin embroidery: Designs worked with the fabric hooped facedown and the specialty thread or ribbon wound onto the bobbin. Most effective for simple designs such as leaves and vines, or special effects with threads too heavy to be threaded through the needle.

Bonding: Permanently joining two fabrics together with a bonding agent. Heat sealing.

Cascade: A way of arranging open windows on the desktop so that they overlap each other, with the title bar of each window remaining visible.

Checkbox: A small square box that appears in a dialog box and that can be selected or cleared. When selected, a tick or a cross appears. A checkbox represents an option that you can set.

Click: Press and release the left mouse button. See also [Right-click](#).

Click-and-drag: Click to select, hold down the left mouse button, move the cursor and release.

Clipboard: A temporary storage area in PC memory for what was last cut or copied. Images on the clipboard can be pasted into designs any number of times.

Close button: Used to close a window or an application. In MS Windows, it appears as a small box with an 'X' in it at the top-right of the title bar.

Color depth: Color depth, also called 'pixel depth', refers to the amount of color information available to each pixel in an image. An image with a color depth of 1-bit can display only two colors. As the

color depth increases, more colors are available – 16 Colors (4 bit), 256 Colors (8 bit), High Color (16 bit), True Color (24 bit).

Color palette: The color palette contains a selection of thread colors tailored for each design. This color scheme, or ‘colorway’, represents the actual thread colors in which a design will be stitched. See also [Thread chart](#).

Color Reduction: See [Image Preparation](#).

Column: Narrow, long, curving shape.

COM port: A standard serial port used as a connection point for peripherals. Other ports may be present if the appropriate internal option cards have been installed. The computer must be informed which port is being used by which peripheral – e.g. COM1, COM2, etc.

Command: An instruction issued to the software in order to carry out an action. It may be as simple as ‘paste an object’ or as complex as ‘regenerate stitches’. It is usually activated via a menu item, toolbar icon, or command button in a dialog.

Command button: A button in a dialog which executes or cancels the selected action. Two common command buttons are Cancel and OK.

Condensed file: See [Outline file](#).

Configuration: The size and type of computer hardware. Can also be used to mean the options provided with your software.

Confirmation message: A message displayed by the software asking you if you are sure you want to proceed – e.g. when you want to delete a design.

Connector stitches: Connector stitches link objects in a design. They can be run stitches or jumps. You can use automatic settings to generate connectors, trims and tie-offs, or add them manually.

Connectors: Hardware devices to connect cables to ports. If the connection is male, the port is female, and vice versa. The wiring configuration of each device is determined by its function.

Copy: To place a copy of a selection onto the clipboard. See also [Duplicate](#).

Copyright: A right granted by the government or by international agreement giving the owner the exclusive privilege to publish and sell artistic work during the life of the creator plus 50 years.

Crest: An embroidered motif like an emblem, an insignia or a Coat of Arms.

Custom designs: Designs created by digitizing artwork or manipulating existing patterns.

Cut: An editing function. To remove a selection from a design. The cut selection is stored in memory (on the ‘clipboard’) and can be pasted into the same or different design.

Cut appliquéd: See [Back appliquéd](#).

Cutter: See [Appliquéd cutter](#).

Default object properties: Default or starting property settings are the ones stored with the design template. These are automatically applied to any newly created objects in the design. See also [Object properties](#).

Default values: Pre-defined settings which determine object properties such as stitch spacing, as well as certain system settings. These are stored in the design template. They remain ‘current’ unless you override them with new settings. See also [Current property settings](#) and [Default property settings](#).

Defects: See [Stitching defects](#).

Density: See [Stitch density](#) or [Thread density](#).

Design: A ‘design’ is a file in the native embroidery format – e.g. EMB, JAN, ART – of embroidery digitizing software. The design source may be a stitch format design. The design contains stitching information such as fabric type in addition to stitched shapes.

Design card: Disk containing computerized embroidery designs read by the embroidery machine’s computer.

Design file: See [File](#).

Design object: See [Objects](#).

Design properties: Designs themselves have properties, some of which can be modified, others not. The most important design property is its source – Native Design, Imported Outlines, Processed Stitches, or Imported Stitches. Other properties include the software version number, stitch count, and so on. Colorways too are properties of the whole design.

Design segment: See [Segments](#).

Design sequence: See [Stitching sequence](#).

Design source: While embroidery files are broadly classified as 'outline' (condensed) or 'stitch' (expanded), EasyDesign internally tags files as belonging to one of four types—Native Design, Imported Outlines, Processed Stitches, or Imported Stitches. See also [Design properties](#).

Design template: See [Template](#).

Design window: The design window is where designs are displayed for viewing and modification.

Desktop: MS Windows terminology for the screen background on which program icons are displayed.

Destination folder: The folder (directory) where you intend to copy or move one or more files.

Detail: An outline, a border, a pickout run, or a small area of the design you want to be stitched out last when using Click-to-Design.

Diagonal backstitch: The backward rows are diagonal, directly connecting the forward rows. Diagonal backstitch is suitable for turning shapes, and gives good results with Jagged Edge. See also [Backstitch](#).

Dialog: An on-screen box that either requests or provides information. Many dialogs present options to choose among before a command is carried out. Some dialogs present warnings or explain why a command cannot be completed.

Digitizer: Usually refers to the person punching or digitizing the design. Digitizer can also refer to the digitizing tablet used by the digitizer. See also [Digitizing tablet](#).

Digitizing: Process of encoding a design. Artwork is converted into a series of 'embroidery objects' to be read and manipulated by a specialist CAD/CAM application. Before outputting to embroidery machine, it is converted into 'stitch data'. See also [Punching](#).

Digitizing tool: Digitizing tools, sometimes referred to as 'input methods', are similar to drawing tools except that the end result is an embroidery object rather than a vector object. Different digitizing tools are suited to creating different shapes or design elements.

Disk: See [Floppy disk](#).

Disk drive: Computers usually have three types of disk drive: a hard disk (or fixed disk) which usually supports the mass storage of information and applications, a floppy disk drive, and a CD ROM drive.

Display: A screen used to display the output of a computer. Also known as the monitor.

Dongle: A security hardware device required to run protected software. Some are attached to a parallel port, others to a USB port.

Double-click: Click the left mouse button twice without moving the mouse. Double-clicking carries out actions such as opening a program from an icon.

Drag: An operation of the mouse. Holding the (left) mouse button while moving the mouse. Typically used for moving something on the screen.

Drawing object: See [Vector image](#).

Dropdown list : A single-line dialog box control that opens to display a list of choices.

Duplicate: When an object is duplicated, it is not copied to the clipboard. This leaves the clipboard free for you to cut or copy other objects.

Editing: Changing aspects of a design via a computerized editing program. Most programs allow you to scale designs up or down, edit stitch-by-stitch or block-by-block, merge lettering with the design, move aspects of the design around, combine designs and insert or edit machine commands.

Emblem: Embroidered design with a finished edge, applied to a garment after stitching, commonly an insignia of identification. Also known as a 'crest' or 'patch'.

Embroidery object: See [Object](#).

Embroidery thread: See [Thread](#).

Entry point: The entry point is the point where the thread enters the embroidery object. This should coincide with the exit point of the preceding object.

Exit: To leave a current window or application.

Exit point: The exit point is the point where thread leaves the embroidery object. This should coincide with the entry point of the next object.

EXP: Stitch or 'expanded' file format native to Melco machines.

Expanded file format: See [Stitch file](#).

Extension: See [File extension](#).

Fabric: Fabrics have many properties, the main one being elasticity or 'fabric stretch'. Surface texture, if present, is another property that

requires different underlay types. The system can automatically compensate for the pull-push effect of different fabrics. Push, warping, and shearing are reduced by suitable underlay for the stitch type and fabric.

Fabric stretch: Embroidery stitches pull the fabric inwards where the needle penetrates. This can cause the fabric to pucker, and gaps to appear in the embroidery. Use automatic pull compensation to counter this effect by 'overstitching' outlines of filled shapes.

Facing: See [Topping](#).

Factory settings: These are the initial system settings as installed. They are a standard known setting that you can return to. Some customers want to create custom settings tailored to the exact fabric they are using most frequently. The 'My Fabric' settings are those retained in the design and can be saved to the template file.

File: A named collection of specifically related information stored on a disk. Designs that have been saved are stored as files.

File extension: The dot and three letters at the end of a filename such as '.BMP'. The extension identifies the file as a certain type, readable by certain applications.

Filename: The name of a file, including the extension, e.g. Cat.BMP.

Fill stitch: Series of running stitches commonly used to cover large areas. Different fill patterns can be created by altering the angle, length and repeat sequence of the stitches. Also known as Geflect stitch.

Finishing: Processes done after embroidery is completed. Includes trimming loose threads, cutting or tearing away excess backing, removing facing or topping, cleaning any stains, pressing or steaming to remove wrinkles or hoop marks and packaging for sale or shipment.

Flagging: Up and down motion of fabric under action of the needle, so named because of its resemblance to a waving flag. Often caused by improper framing of goods. Flagging may result in poor registration, unsatisfactory stitch formation and birdnesting.

Floppy disk: A flexible disk permanently sealed in a square plastic jacket – e.g. HD/DD 3.5" floppy disk. Used for information storage 'off-line' for

security and/or infrequently used data. Also used for transferring punched embroidery design (stitch file) data from computer to embroidery machine.

Folder: A collection of files and sub-folders that are stored together on a disk. Part of structure for organizing files on a disk.

Fringe: Threads that are cut and hang loosely from the edge of a design.

Grid: Grid lines provide visual cues to help you accurately place a design. When you start the software for the first time, grid lines appear by default.

Hard disk: A device for mass information storage. Usually the disk is fixed inside the system unit, and a second hard disk can be added. When you store information on the hard disk it will remain there until you delete it. As it has a finite capacity, file management is required.

Hardware: Computer componentry, including monitor, keyboard, digitizing tablet, printer, scanner, sewing machine, etc.

Heirloom embroidery: Embroidered goods designed to be passed down from generation to generation.

I-beam: One shape taken by the PC pointer, it indicates that text can be input at the point selected. The shape is like the capital letter 'I'.

Input method: See [Digitizing tool](#).

Jump: A frame or hoop movement without a needle penetration, commonly used to get from one point in a design to another.

Lacework: Lacework involves the use of threads to produce overall embroidery of full-length fabrics. Most often used to embellish women's apparel and home fashions. Such work typically uses boring. It is the most widely used application for Schiffli machines.

Line art: A drawing with only two colors – usually black and white.

List box: A single-line dialog that opens to display a list of choices.

Lock stitch: Commonly referred to as a lock-down or tack-down stitch, a lock stitch is formed by three or four consecutive stitches of at least a 10-point movement. It should be used at the end of all columns, fills and at the end of any element in your design where jump stitches will follow, such as color changes or the end of a design. May be

stitched in a triangle, star or in a straight line. Lock stitch is also the name of the type of stitch formed by the hook and needle of home sewing machines, as well as computerized embroidery machines.

Logo: Name, symbol or trademark of a company or organization. Short for logotype.

Looping: Loops on the surface of embroidery generally caused by poor top tension or tension problems. Typically occurs when polyester top thread has been improperly tensioned.

Max/Min stitch length: The minimum and maximum stitch lengths allowable in a design determine the outside limits as measured between needle penetration points. They are governed by the minimum and maximum frame movements that the machine can make.

Maximize button: For Windows, the small box in the center of the group of three at the right of the title bar. Click the Maximize button to enlarge a window to its maximum size.

Memory: The place in the computer's system unit that stores information while you are working with it. If you exit without saving information in memory, it will be lost.

Menu bar: The menu bar contains dropdown menus of commands. Some of the same commands are available on the toolbar.

Menu chart: The menu chart provided with the software lets you select commands directly from the digitizing tablet using the puck. You need to 'register' it before use.

Minimize button: For Windows, the small box to the left of the group of three at the right of the title bar. Click the Minimize button to reduce a window to its minimum size.

Modeless dialog: Dialogs which stay on the screen and are available for use at any time but permit other user activities. In contrast, 'modal' dialogs require the user to respond before continuing the program.

Monitor: The screen on which punching or stitching progress can be followed, stitch by stitch.

Monogram: Embroidered design composed of one or more letters, usually the initials of a name.

Mouse: A device, equipped with control buttons and designed to roll about on the table next to the keyboard. As the mouse moves, its circuits relay signals that move a pointer on the screen.

Nap: A fuzzy or downy surface of fabric covering either one side or both, produced by brushing loosely twisted yarns.

Native file format: A design saved in the original format of the application you are working with is said to be the 'native' file format. It can also refer to the stitch file format required by a specific embroidery machine. When saved to another format, it is known as a non-native format.

Needle: Small, slender piece of steel with a hole for thread and a point for piercing fabric. A machine needle differs from a handwork needle; the machine needle's eye is found at its pointed end. Machine embroidery needles come with sharp points for piercing heavy, tightly woven fabric; ball points which glide between fibers of knit; and variety of specialty points, such as wedge points, which are used for leather.

Needle points: You can view needle points in a design to check density or, for instance, to select stitches for editing.

NORMAL template: Default template. See also [Template](#).

Object: In embroidery design terms, an object is an individual 'element' of a design. An object has many properties, such as its size, color, sequence in the design, stitch type and values, including the rules for stitching. See also [Vector image](#), [Vector object](#).

Object outline: See [Outline file](#).

Object properties: All embroidery objects in EasyDesign contain defining settings or 'values'. The values stored with an object become its 'properties'. All objects have certain properties in common such as size and position. There are other, more specific properties of objects which depend on the object type.

Object recognition: See [Outline recognition](#).

Object type: An object has a type, shape, thread type and color, stitching settings and a position in the stitching order. The object type may or may not determine the intended final appearance of the stitching.

Outline file: Outline or 'condensed' files are high-level formats which contain object outlines, object properties and stitch data. When you open an outline file in EasyDesign, corresponding stitch types, input methods and effects are applied.

Outline files: can be scaled, transformed and reshaped without affecting stitch density or quality. See also [Stitch file](#).

Outline stitch: Stitch such as Run or Satin used to outline an embroidery object.

Overview window: Use the Overview window to view a thumbnail of the design. The window is updated whenever you make a change, and can be used to zoom in or pan across the design window.

Pan: Use Pan to view parts of a design which are not currently visible in the design window.

Parallel port: A connection on a computer, usually LPT1, where you plug in the cable for a parallel printer and/or a dongle. Parallel ports are used to connect some embroidery machines. They are named LPT1, LPT2, etc. When you set up a parallel machine connection, select the parallel port and the required protocol, and complete the machine setup procedure.

PCX: PC Paintbrush bitmap image format.

Pattern outline: See [Motif Run](#).

Pencil rub: Low-cost way of producing an embroidery design sample. Consists literally of a piece of tracing paper placed over a stitchout and rubbed lightly with a pencil to produce an impression of the embroidery.

Peripheral: Any device connected to a computer which is to some degree controlled by the computer – e.g. an embroidery machine or printer.

Pointer: A part of the screen display, the pointer can take various shapes. It is moved by moving the mouse and can be used to point to anything on the screen to make selections and indicate points for input. It also indicates when the computer is working and no input is possible.

Point: Unit of measurement, with 10 points equal to 1 mm.

Port: A connection on a computer where you plug in the cable that carries data to another device. Ports which are used to attach peripherals have names like COM1 or LPT1 so that you can specify where the peripherals are attached.

Position: The Position indicator shows position of the design (X, Y) in the design window.

Program: A computer program or ‘application’ is generally used for a particular kind of work, such as word processing or database management.

Properties: See [Object properties](#).

Protocol: The communications protocol depends on the connection type between the computer and the embroidery machine. This will be one of: standard serial, parallel, serial to parallel converted (DCI), or interface card.

Puckering: Result of the fabric being gathered by the stitches. Many possible causes include incorrect density, loose hooping, lack of backing, incorrect tension or dull needle.

Pull compensation: Digitizing technique that takes into account the distortion of a design that will occur because of the interaction of thread with fabric. ‘Push and pull’ will cause a circle digitized perfectly round to sew with the sides pushed out, resulting in an egg shape. Generally, it is necessary to extend horizontal elements and reduce vertical elements. See also [Automatic pull compensation](#).

Push-Pull: When any stitch is sewn into fabric, the tension in the thread between needle penetrations can build up and result in a ‘push-pull’ effect. This can cause distortions in your sewn designs, poor stitch registration and even the bunching of the fabric. The degree of distortion can be affected by the following factors: stitch density, fabric type, underlay, backing type, thread type and garment orientation. See also [Stitch-Pull](#).

RAM: Random Access Memory, computer chip maintaining memory.

Read: To open a design which has been written on a design card or to an embroidery machine.

Redraw: The screen display is refreshed. This is useful when parts of the display have become obscured in the course of editing. See also [Slow Redraw](#).

Refresh: See [Redraw](#).

Resequence: You can change the position of a selected object by cutting it, then pasting it somewhere else in the stitching sequence, or by using the Resequence command. You can also resequence objects by color or using the Color-Object List.

Resizing: See [Scaling](#).

Resolution: Resolution determines the number of dots per inch (dpi) used to create an image. The higher the value, the clearer the image, but the more storage space required. A resolution of 75 dpi generally produces good results.

Right-click: To press and release the right mouse button. See also [Click](#).

Rotation handles: When you select an object, selection handles display at its extremities. If you click the object again, rotation and skew handles appear around the object. Rotation handles appear at the corners of the object and an anchor point displays at the object's center. Skew handles are diamond-shaped and appear at the center-top and bottom of the object. See also [Selection handles](#).

Run stitch: Run stitch (also called Walk stitch) places a single row of stitches along a digitized line. The needle penetrations are placed in consecutive order. Run is generally used for stitching outlines and connector stitches. Run stitch length can be set to automatically vary in order to follow tight curves.

Satin stitch: Type of fill stitch. Formed by closely arranged zigzag stitches, it can be stitched at any angle and with varying lengths. The thread is laid across a shape with a zigzag sewing action where two stitches form a column. Hence it is only suitable for small or narrow shapes. As the stitches are almost parallel, Satin provides good coverage. It is often used for lettering, outlining, and details. Because there are generally no needle penetrations breaking up the fill, Satin stitch creates a glossy effect.

Save: To store (design) information in a file. Each time you save a design, you replace the previous version using the filename. You should save your design frequently.

Scaling: Ability to enlarge or reduce a design in size. In stitch or 'expanded' format, most scaling is limited to ±5% because the stitch count remains constant despite final design size. In outline or 'condensed' formats, scale changes may be more dramatic because stitch count and density are recalculated.

Schiffli machine: Commercial embroidery machine that utilizes the combination of needle and shuttle to form a stitch. Massive in size. Some schiffli machines – also known as looms – weigh 10 tons and have up to 1024 needles. Most Schiffli machines do not have automatic thread trim or automatic color change. Excellent for emblem production, the creation of lace, embroidery production on oversized items and production orders of very large quantities.

Screen calibration: You need to calibrate your monitor so that designs at 1:1 scale appear at real size. Do this when you first install EasyDesign, whenever you change your monitor, or adjust your monitor's horizontal or vertical controls.

Screen resolution: See [Pixels](#).

Scroll bar: The bar at the bottom and right edge of a window whose contents are not entirely visible. Each scroll bar contains a small box, called a scroll box, and two scroll arrows to allow different types of scrolling.

Security Device: See [Dongle](#).

Select: To highlight an object or group of objects for the purpose of editing. Only selected items can be edited.

Selection handles: Eight small squares that appear symmetrically at the corners and edges of a selected object. Use them to position and resize objects. See also [Rotation handles](#).

Sequence: See [Stitching Sequence](#).

Sequins: Sequins, also known as 'spangles', are small plastic disks with a hole in the centre. The spangles are stored on rolls, each one joined to the next by a weak link. They are stitched onto fabric by placing a spangle in front of the needle whilst needles are out of the fabric.

Serial port: A connection point on a computer where you plug a serial communications device such as a modem. PC serial COM ports are male connectors, and can be either 9-pin or 25-pin. They are named COM1, COM2, COM3, etc. The number of available ports limits the number of devices you can connect. If additional ports are required, you can add them. Multi-port serial cards can also be used.

Serial Port Setup: Here you can adjust Baud, Data Bits, Stop Bits, Parity values. These settings must be identical to those of the embroidery machine. The type of handshaking must match the type of cable you are using.

Short stitch: Digitizing technique that places shorter stitches in curves and corners to avoid an unnecessarily bulky build-up or stitches.

Shortcut key: A key stroke or a series of keystrokes you can use to perform a task instead of using the mouse. For example, Ctrl+C actions the Copy command.

Sizing handles: See [Selection handles](#).

Skew handles: See [Rotation handles](#).

Slow Redraw: Use to redraw your design slowly. Slow Redraw lets you view the stitching and color sequence of a design in slow motion.

Software: Programs, such as MS Windows and Digitizer EX, which run your computer.

Spangles: See [Sequins](#).

Specialty threads: Threads designed for effects such as shine, glitter, iridescence or thickness. The threads often are made from synthetic materials including rayon, mercerized cotton, metallics and textured nylon.

Stabilizer: Also know as 'backing', stabilizers are woven or non-woven materials used underneath the item or fabric being embroidered to provide support and stability. It can be hooped with the item or placed between the machine throat plate and hooped garment. Available in various weights and types such as cut-away, tear-away and wash-away (soluble). The more stitches your design has, the more backing you will need. Professional embroiderers use tear-away stabilizers for woven fabrics and cut-away stabilizers for knits. See also [Topping](#).

Status bar: Provides information about the whole design: number of stitches, position of the design (X, Y), number of colors (C), number of stops (S), etc.

Stitch: A stitch is one needle penetration; also used to refer to the thread laid down from one needle penetration to the next.

Stitch angle: The stitch angle is the angle the overall stitching follows within a shape. The shape may have a fixed stitch angle – e.g. 45° to the horizontal – or multiple stitch angles.

Stitch bunching: Standard stitch spacing is calculated at the outside edge of a shape. With sharp curves, spacing which provides adequate coverage on the outside edge may cause bunching along the inside edge. This may cause thread breakage when stitching out.

Stitch count: Stitch count refers to the number of stitches in a design. In EasyDesign one stitch is considered one machine revolution. See also [Design properties](#).

Stitch density: The number of stitches per given area (or stitch lines per distance in a fill).

Stitch editing: Digitizing feature that allows one or more stitches in a pattern to be deleted or altered.

Stitch file: Stitch or 'expanded' designs are low-level formats for direct use by embroidery machines. They contain only stitch coordinates and

machine functions. Stitch designs are generally not suited to scaling because stitches are not regenerated during rescaling. See also [Outline file](#).

Stitch length: The distance between two needle penetration points. For maximum stitch length, the length is measured according to the X and Y co-ordinates, whichever is greater. Run stitch length can be set to automatically vary in order to follow tight curves. See also [Max/Min stitch length](#).

Stitch-Pull: When any stitch is sewn into fabric the tension in the thread between needle penetrations can build up and result in Stitch-Pull. Stitch-Pull can cause distortions in your sewn designs, poor stitch registration and even the bunching up of fabric. The amount of Stitch-Pull that results in your design can be affected by the following factors: Stitch Density, Fabric Type, Underlay, Backing Type, Thread Type and Garment Orientation. See also [Push-Pull](#).

Stitch type: Three basic stitch types are available with lockstitch machines – Run, Satin and Tatami (Weave). Digitizer EX provides many variants of these.

Stitch spacing: Spacing between two consecutive needle penetrations on the same side of a column. The smaller the value, the greater the stitch density. For more open stitching, use larger values.

Stitching defects: Stitching defects may appear in the form of gaps between filled areas, fabric show-through and thread breaks. These are often caused by incorrect stitching settings – e.g. setting pull compensation too small for the fabric stretchiness.

Stitching sequence: The embroidery objects in a design form a stitching sequence. Initially, objects are stitched in the order in which they were created. You can change the position of a selected object by cutting it, then pasting it somewhere else in the sequence, or by using the Resequence command. You can also resequence objects by color or with the Color-Object List.

Tatami stitch: Series of run stitches, commonly used to cover large, irregular shapes. Stitches are laid in rows traversing back and forth across the shape. These can be parallel or slightly turning. Different fill patterns can be created by varying the stitch length, angle or sequence. Also known as Weave stitch.

Template: Special files used to store styles and default property settings. Use templates when digitizing frequently-used design types to save time re-adjusting the current property settings.

Tension: Tautness of thread when forming stitches. Top thread tension, as well as bobbin thread tension, need to be correctly set. Proper thread tension is achieved when about one third of the thread showing on the underside of the fabric on a column stitch is bobbin thread.

Thread: Fine cord or natural or synthetic material made from two or more filaments twisted together and used for stitching. Machine embroidery threads come in rayon (high sheen), cotton (duller finish), polyester (strong and colorfast), metallics (synthetic core wrapped with metal foil or thin slivers of metal foil) and acrylic (sheen similar to rayon).

Thread chart: Thread charts are lists of pre-defined thread colors. They may be based on commercially available thread charts, or charts you define yourself. You can copy colors between different thread charts to create your own charts from existing colors. See also [Color palette](#).

Thread code: Code is the identification number of a thread color in a brand.

Thread density: Different thread density systems are used by different thread manufacturers. Density A is normal embroidery thread (density 120/2, or 40). Density B is thicker, Density C is finer, and Density D is very fine.

Thread thickness: See [Thread density](#).

Thread type: Embroidery thread varies in thickness. Types are A, B, C and D. Stitch density should be set according to the thread type. See also [Thread thickness](#).

Tie-ins: Tie-in stitches are inserted at the start of objects to prevent stitches from unraveling. They are inserted inside the shape on the second stitch. You generally use them when the previous connector is trimmed.

Tie-offs: Tie-offs are generally placed before trims to prevent stitches from unraveling. You can adjust connector settings to automatically add tie-offs under certain conditions, or add them manually. You can also include trim functions so machines with trimmers cut the thread automatically.

Title bar: The horizontal bar located at the top of a window and containing the title of the window. On many windows, the title bar also contains the Control menu box and Maximize and Minimize buttons.

Toolbar: Toolbars provide quick and easy access to EasyDesign commands. Click a toolbar button to activate a command or, where applicable, right-click to view and adjust its settings.

Topping: Material hooped or placed on top of fabrics that have definable nap or surface texture, such as corduroy and terry cloth, prior to embroidery. The topping compacts the wale or nap and holds the stitches above it. It includes a variety of substances, such as plastic wrap, water-soluble plastic 'foil' and open-weave fabric that has been chemically treated to disintegrate with the application of heat. Also known as 'facing'. See also [Stabilizer](#).

Travel on Edge: Trapunto is a general term for very open fill stitching, often used as a background or for filling large shapes. In EasyDesign, Travel on Edge effect forces travel runs to the edges of objects so they do not show through open or loose stitching.

Travel run: Travel runs are typically used to connect segments of complex shapes. They can also connect adjacent objects. Because runs are not trimmed, they may be visible in the final embroidery. For this reason, they are less commonly used as connectors between objects than jumps. If objects are adjacent and connectors will be hidden, they can be used.

Traveling: You generally check a design's stitching sequence by 'traveling' through it by stitches, segments, functions or objects.

Trims functions: If you are using a machine with an automatic trimmer, the trim code causes the thread to be cut after a tie-off. In the software, trims are represented by a triangle with a small circle at the point where stitching starts again. The trimmed connector appears as a dotted line. You can adjust connector settings to automatically add trims, or add them yourself.

Trimmers: Devices built into an embroidery machine to automatically trim or cut remaining thread when the design jumps from one area to another or performs a color change.

Trimming: Action of cutting loose thread, removing backing, etc, from the final embroidered product.

TrueType Font: Digital font technology designed by Apple Computer and now used by both Apple and Microsoft in their operating systems.

TWAIN: Industry standard which allows devices (such as scanners) to communicate directly with design and layout programs. Both device and program must be TWAIN-compliant. This lets you use any TWAIN-compliant scanner with your software.

Underlay: Stitches sewn before other design elements to help stabilize fabrics. The stitching action that will attach the backing to the fabric being embroidered. It also supports the top embroidery for a more lofty, dimensional look. Underlay stitches are made up of a series of single run stitches, usually with a very short stitch length, and are digitized manually or placed automatically under the column (satin) or fill stitch areas of your embroidery design.

Values: The actual settings – letters and numbers – that you enter into dialogs. See also [Object Properties](#).

Variable sizing: Ability to scale a design to different sizes.

Weave stitch: See [Tatami stitch](#).

Weight: When referring to T-shirts, the three standard weight divisions are mid-weight/value, heavyweight/premium, and super heavyweight.

Write: To send design information to an embroidery disk, design card or embroidery machine for immediate stitchout or storage.

X/Y coordinates: The horizontal (X) and vertical (Y) distances on a graph or computer screen. Use X values to measure width, and Y values to measure height.

Zoom factor: The scale at which the design is currently displayed.

INDEX

A

accents, monograms 169
 adding folders 194
 Align Bottom tool 107
 Align Centers Horizontally tool 107, 206
 Align Centers tool 107, 206
 Align Centers Vertically tool 107, 206
 Align Left tool 107, 206
 Align Right tool 107, 206
 Align Top tool 107, 206
 anchor points
 rotation 110
 angles, *see* stitch angle
 anti-aliasing 78
 applications, EasyDesign & EasyEdit 180
 appliquéd
 cover stitch settings 138
 creating objects 137
 digitizing 137
 printing 176
 See also Appliqué
 Appliqué tool 137, 207
 arranging objects 106
 grouping 108
 locking 108
 arrow keys, traveling by 34
 artwork
 anti-aliased images 78
 choosing 77
 dithered images 78
 preparing for automatic digitizing 85
 scanning 79
 ATA PC cards 4, 181
 precautions 182
 Auto Split, with Satin Fill 59
 automatic
 backup 26
 borders 171

save options 26
 underlay 125
 borders, *See also* lettering
 automatic digitizing 92, 94
 cleaning up images 86
 color reduction 86
 converting grayscale images 96
 cropping images 82
 image preparation tools 87
 noise filtering 87
 outline sharpening 86
 preparing images 85
 automatic stitching 91
 creating embroidery 94
 creating embroidery designs 91

using as backdrops 80
 blackwork fills 69
 Border tool 51, 54
 borders
 adding 171
 Border tool 207
 converting lines 52
 creating 54
 digitizing 54
 setting width 54
 boundaries, digitizing for appliquéd 137
 bounding box
 selecting objects 38
 selecting stitches 141
 Browse For Folder dialog 188, 194
 browsing for designs 188

B

Back tool 32–33, 208
 backdrops
 digitizing with backdrops 77
 displaying 35
 locking and unlocking 108
 using bitmap images 80
 backgrounds
 changing 47
 changing colors 47
 changing fabrics 47
 color mixing 48
 Backtrack tool 132, 206
 backtracking objects 132
 baselines
 adjusting 160
 reshaping circular 160
 reshaping custom 161
 reshaping horizontal 160
 bitmap formats, supported 210
 bitmap images
 anti-aliasing 78
 dithered 78

calibrating monitor 6
 catalogs, printing 193
 Center Run underlay
 adjusting settings 126
 setting values 126
 Change Design View tool 187, 208
 Change Locale command 187
 changing locale (language) 187
 Character Map 166
 characters, special 166
 Choose Fabric dialog 128
 Choose Locale dialog 187
 circle objects, reshaping 114
 circles, digitizing 56
 circular baselines, reshaping 160
 circular orientations 150
 Click-to-Centerline tool 92, 93, 207
 Click-to-Design
 automatic digitizing 91
 Click-to-Design Advanced tool 94, 207

Click-to-Design dialog 94
 Click-to-Design Instantly tool 94, 207
 Click-to-Outline tool 92, 93, 207
 Click-to-Parallel Weave Fill tool 92, 207
 Click-to-Parallel Weave Fill without Holes tool 92, 207
 Click-to-Turning Angle Satin Fill tool 92, 207
 cloning, objects 101
 Cloth Setter 174
 Cloth Setter device 174
 color changes, manual 73
 Color dialog 48
 color layers, printing 177
 color mode 79
 color reduction, automatic digitizing 86
 colors
 changing 73
 changing background 47
 Color chart 72
 current color 73
 mixing background 48
 resequencing by 104
 selecting 72
 thread colors 72
 traveling by 32, 33
 columns
 creating 54
 digitizing 54, 55
 setting width 54
 combining
 designs 99
 objects 99
 objects (nesting) 102
 commands
 popup menus 24
 selecting 23
 undo/redo 24
 using toolbars 23
 complex shapes, digitizing 55
 condensed files 179
 connections
 reconnecting Design Gallery to EasyDesign 190
 connections, peripheral device
 settings 4
 connectors
 minimizing with nesting 102
 show/hide 30
 consecutive objects, selecting 38
 control points 52
 adding 113
 deleting 114
 moving 113
 reshaping objects 113
 selecting 113
 conversion tables
 supported stitch file formats 209
 Convert Options dialog 194

Convert tool 194, 208
 converting
 file types 194
 photos to designs 96
 See also converting file formats
 Copy tool 100, 206
 copying
 and pasting designs 195
 cloning objects 101
 designs 195
 duplicating objects 101
 objects 100
 cover stitches
 appliquéd 138
 Create/Edit Hoop dialog 45
 Crop Image command 82
 cropped images, reshaping 82
 cropping images 82
 Current Color tool 73, 207
 current color, changing 73
 custom baselines, reshaping 161
 custom hoops, creating 44
 custom orientations 151
 custom templates, selecting 24, 190
 cut & paste
 designs 195
 objects 100
 resequencing 103
 Cut Hole tool 132, 206
 Cut tool 103, 206
 cutting lines, appliquéd 137

D

default, object details 119, 121
 Delete command 102
 deleting
 designs 196
 folders 194
 objects 102
 stitches 143
 templates 123
 Design Gallery
 icon 186
 opening 186
 reconnecting to EasyDesign 190
 Design Gallery icon 206
 Design Gallery Properties dialog 191
 design information, viewing 35
 Design Name dialog 195
 design printouts 35
 print options 174
 printing 174, 181, 193
 designs
 accessing 189
 adding lettering 145
 browsing 188
 combining 99
 converting 194
 converting formats (tables) 209
 creating new 24
 display thumbnails 187
 managing 186
 measuring 25
 opening 22, 190
 opening in Easy Edit 22
 opening multiple 22
 previewing 35
 print preview 173
 printing 173, 193
 redrawing slowly 34
 renaming 195
 resequencing 103
 saving 26
 selecting 189
 sending and receiving 181
 sending multiple to machine 182
 sending single designs to machine 182
 summary information 187
 viewing 28
 viewing in folders 192
 viewing in the whole window (Design Gallery) 188
 with MA Hoop 46
 writing single designs to machine 182
 details lists, sorting 193
 dialogs
 Browse For Folder 188, 194
 Choose Fabric 128
 Choose Locale 187
 Click-to-Design 94
 Color 48
 Convert Options 194
 Create/Edit Hoop 45
 Design Gallery Properties 191
 Design Name 195
 Embroidery Gallery 65
 Fabric Settings 128
 Fill Holes 133
 Image Preparation 89
 Manage Fabrics 128
 Monogramming 168
 New 190
 New Fabric 128
 Object Details > Appliquéd 138
 Object Details > Dimensions 107, 109, 157
 Object Details > Feathering 134
 Object Details > Fill Stitch 58, 59, 60, 61, 62, 121, 136, 164
 Object Details > Gradient Fill 135
 Object Details > Lettering 146, 147, 148, 155, 156, 165, 170
 Object Details > Line Stitch 67
 Object Details > Parallel Fill 115
 Object Details > Photo Click 96
 Object Details > Underlay 125,

127
Object Properties > Fill Stitch 69
Open 123
Overview window 29
Print Catalog Options 194
Print Options 174, 175, 176, 177, 193
Print Preview 174
Purge Recover and Backup Directories 243
Resequence 40, 103, 104
Save As 26, 122, 181
Save Hoop As 45
Save Options 181
Screen Calibration 6
Select Border 169, 171
Select By Color 31
Select Character 166
Select Motif 69
Select Source 6
Sequence 161
Slow Redraw 34
Work Environment 43
Work Environment > Autosave tab 26
Work Environment > Display 45, 47, 48
Digitize toolbar
Appliqu  137, 207
Border 51, 207
Click-to-Centerline 92, 93, 207
Click-to-Design Advanced 94, 207
Click-to-Design Instantly 94, 207
Click-to-Outline 92, 93, 207
Click-to-Parallel Weave Fill 92, 207
Click-to-Parallel Weave Fill without Holes 92, 207
Click-to-Turning Angle Satin Fill 92, 207
Current Color 73, 207
Embroidery Gallery 64, 207
Image Preparation 88, 207
Lettering 148, 154, 161
Match to Palette 92, 207
Motif Run Line 52, 66, 67
Outlined Image Preparation 89, 207
Parallel Embossed Fill 55
Parallel Embossed Fill-Circle 56
Parallel Embossed Fill-Rectangle 57
Parallel Fill 51, 207
Parallel Fill Circle 207
Parallel Fill Rectangle 207
Parallel Fill-Circle 52
Parallel Fill-Rectangle 52
Parallel Motif Fill 55, 69, 70
Parallel Motif Fill-Rectangle 57, 69, 70
Parallel Satin Fill 55
Parallel Satin Fill-Circle 56

Parallel Satin Fill-Rectangle 57
Parallel Weave Fill 55
Parallel Weave Fill-Circle 56
Parallel Weave Fill-Rectangle 57
Photo Click Advanced 96, 207
Photo Click Instantly 96, 207
Run Line 51, 207
Single Run Line 52
Triple Run Line 52
Turning Angle Embossed Fill 55
Turning Angle Fill 51, 207
Turning Angle Satin Fill 55
Turning Angle Weave Fill 55
digitizing
circles 56
columns and borders 54
complex shapes 55
manual 51
Motif Run 66
squares and rectangles 57
with backdrops 77
digitizing methods 51
Border 54
Motif Run 66
Parallel Fill 55
selecting 51
Digitizing toolbar
Border 54
digitizing, automatic 92
Display
Grid tool 25, 208
Hoop tool 208
Images tool 35, 208
Needle Points tool 30, 208
viewing selected parts 31
Display Hoop tool 25
display settings, changing 47
distances, measuring 25
dithering 78
Duplicate command 101
duplicating objects 101

E

EasyDesign
starting 20
when to use 180
EasyEdit
starting 21
when to use 180
Edge Run underlay, adjusting settings 126
edges, applying Feather Edge 133
Edit menu
Delete 102
Duplicate 101
Group 108
Lock 108
Ungroup 108
Unlock 108

Edit toolbar
Align Bottom 107
Align Centers 107, 206
Align Centers Horizontally 107, 206
Align Centers Vertically 107, 206
Align Left 107, 206
Align Right 107, 206
Align Top 107, 206
Backtrack 132, 206
Cut Hole 132, 206
Feather Edge 133, 134, 206
Fill Holes 133, 206
Flip Along Horizontal 111, 206
Flip Along Vertical 111, 206
Gradient Fill 135, 206
Object Details 120, 136, 206
Polygon Select 39, 206
Repeat 132, 206
Resequence 40, 103, 104, 206
Reshape 68, 82, 113–115, 116, 151, 152, 156–161, 206
Rotate CCW/CW 110, 206
Rotate Hoop 90° CCW / CW 44, 207
Select 38–39, 101, 155, 157, 159, 206
Split Block 143, 207
Stitch Mode 141–143, 207
Underlay 125, 206
editing lettering
on-screen 154
with Lettering dialog 155
editing stitches 17, 140
inserting stitches 142
moving stitches 142
effects
feather edge 133
Gradient Fill 135
Travel on Edge 136
Embossed Fill
pattern size 62
stitch angle 62
embossed fills, creating 61
Embroidery
Gallery dialog 65
Gallery tool 64
embroidery
design formats 179
files, opening 180
hoop 25
lettering 18, 145
machine connections 4
embroidery elements, printing 175
embroidery file formats 209
Embroidery Gallery tool 207
embroidery machine
See also machine formats
Embroidery menu
Insert Design 99, 169
entry/exit point, changing 116

F

Fabric Settings dialog 128
 fabrics
 changing background 47
 fabrics, managing 128
 fabrics, setting 127
 fancy fill stitches
 Motif Fill 68
 Feather Edge
 applying 133
 effect 133
 settings 134
 tool 133
 Feather Edge tool 206
 file tree, refresh 189
 file types
 JMT 122
 outline & stitch files 209
 files
 combining designs 99
 opening embroidery 180
 stitch 179
 Fill Holes dialog 133
 Fill Holes tool 133, 206
 fill stitches, types 58
 filling holes, Parallel Fill 133
 fills
 adjusting motif fills 69
 blackwork 69
 Embossed 61
 Satin 59
 Weave 60
 fixed stitch angles 55
 fixed-length horizontal
 orientations, creating 148
 Flip Along Horizontal tool 111, 206
 flipping stamps 65
 folders
 limiting file types 192
 refreshing/validating 189
 renaming/adding/deleting 194
 sorting 192
 Folders icon 188, 208
 formats
 design 179
 embroidery file 179
 expanded 179
 outline 179
 stitch 179
 Forward tool 32–33, 208

G

gaps, offsetting filled holes 133
 Gradient Fill
 applying 135
 overview 135
 tool 135, 206
 Gradient Fill tool 135

graphics packages, linking 83
 grayscale images, converting to
 designs 96
 grid
 hiding/showing 25
 setting spacing 43
 grids 42
 Group tool 108
 grouping objects 108
 guide patterns
 Motif Fill 70

H

handles, *see* selection handles
 hardware
 peripheral device settings 4
 setting up embroidery
 machines 4
 help
 accessing 9
 viewing the online manual 8
 See also troubleshooting
 hidden objects, display 40
 holes
 cutting 132
 filling holes 133
 hoop
 creating custom hoops 44
 displaying 25
 embroidery 25
 hiding and showing 25
 size, changing 43
 hoop types, supported 210
 hoops 42
 centering 44
 changing 43
 rotating 44
 horizontal baselines,
 reshaping 160
 horizontal orientations 148
 horizontal orientations,
 fixed-length 148

I

image
 sharpening 80
 Image menu
 Crop Image 82
 Insert Image 80
 Scan 81
 Scanner Setup 6
 Touch Up Picture 83
 Image Preparation
 dialog 89
 tool 207
 image preparation
 cropping 82

preparing non-outlined
 images 88
 preparing outlines 89
 summary 88
 tools 87
 Image Preparation tool 88
 images
 anti-aliased 78
 bitmaps 80
 cleaning up 86
 color reduction 86
 cropping 82
 digitizing automatically 92, 94
 dithering 78
 editing 83, 83
 noise filtering 87
 non-outlined 88
 outline sharpening 86
 outlined vs non-outlined 85
 preparation tools 87
 scanning 78, 81
 sharpening outlines 89
 Imported Outlines files 180
 Imported Stitches files 180
 Insert Border tool 171, 207
 Insert Design command 99, 169
 Insert Image command 80
 inserting
 one object into another 102
 stitches 142
 italics, lettering 146

J

JAN format 179
 JEF format 179
 JMT files 122
 Jump
 by 1 Stitch tool 33, 208
 by 10 Stitches tool 33, 208
 by 100 Stitches tool 33, 208
 by Color tool 32, 33, 208
 by Object tool 32, 39, 208
 to Start/End Design tool 32, 33,
 208
 jumping
 by stitches 33
 using the arrow keys 32, 34

K

keyboard shortcuts 204

L

last stitch, keep or omit 55

layout
 Motif Fills 70
 layout, adjusting lettering 154
 length
 Center Run underlay stitches 126
 Edge Run underlay stitches 126
 Run and Triple Run 53
 Weave Fill 61
 Weave underlay stitches 126
 letter sequencing, changing 161
 lettering
 adding 145
 adjusting individual letters 158
 adjusting layout 154
 adjusting Satin stitch settings 164
 adjusting stitch settings 163
 adjusting Weave stitch
 settings 164
 automatic borders 171
 changing stitch types 164
 Character Map 166
 coloring 159
 coloring on-screen 159
 creating 147
 editing 154
 entering on-screen 146
 I-beam 159
 individual letter spacing 152
 italics 146
 line spacing 152
 reshaping horizontal
 baselines 160
 rotating 158
 scaling 155–157
 selecting symbols 166
 setting orientation 147
 spacing 151
 special characters 166
 special characters and
 symbols 165
 special effects 167
 transforming 157
See also baselines
See also fonts
Lettering Art
 distorting objects 167
 editing letters 167
 effects 167
 None command 168
 removing 168
 tool 167, 169
 lettering orientation 160
 selecting 147
Lettering tool 146–148, 154–165, 207
Lettering toolbar
 Insert Border 171, 207
 Lettering 146, 147, 159, 165, 166,
 207
 Lettering Art 167, 169
 Lettering Art > None 168
 Monogramming 168, 207
 lettering, monograms 168

letters
 changing spacing 152
 reshaping 158
 limiting files in folders 192
 line spacing, lettering 152
 lines
 converting to borders 52
 digitizing 52
 locale, changing languages 187
 locate missing files 189
 Lock command 108
 locking
 backdrops 108
 objects 108

M

MA Hoop, sending designs 46
machine
 formats, saving 181
See also embroidery machine
 sending single designs 182
 sending, receiving and deleting
 multiple designs 182
 writing single designs 182
Manage Fabrics dialog 128
 managing designs 186
 manual color changes, inserting 73
Match to Palette tool 92, 207
Measuring Tape command 25
 memory cards 4, 181
 minimum stitch length
 Weave Fill 61
Mirror Along Vertical tool 111, 206
 missing files, locating 189
 modifying designs, Resequence
 dialog 40
 modifying objects
 changing entry point 116
 changing exit point 116
 flipping 111
 grouping 108
 locking 108
 reshaping circles 114
 rotating 110
 scaling 109
 using Lettering Art 167
monitor, calibrating 6
 monogram designs, creating 168
Monogramming dialog 168
Monogramming tool 168, 207
 monograms
 editing 169
Motif Fill
 applying 69
 filling shapes with 69
 layout motifs 70
 modifying layouts on-screen 70
 motif fills, adjusting 69
Motif Run

overview 66
 reshaping 68
 scaling 67
 selecting motifs 67
 using 66
 values 67
Motif Run Line tool 52, 66, 67
motifs
 adjusting offsetting on-screen 71
 adjusting spacing on-screen 71
 laying out on-screen (Motif
 Fill) 70
Motif Fill 68
 rotating patterns on-screen 71
 scaling (Motif Run) 67
 selecting (Motif Run) 67
 skewing patterns on-screen 71
See also Motif Run
moving objects
 nudging 106
 positioning with X:Y
 coordinates 107
 with click and drag 106
moving stitches 142
multiple designs
 sending to machine 182

N

Native Design files 180
native formats 179
needle points
 selecting stitches 141
 show/hide 30
nesting objects 102
New
 dialog 24, 190
 Fabric dialog 128
 tool 24, 205
 new designs, creating 24, 190
 noise filtering 87
 non-outlined images 88
NORMAL template
 overview 122
 using 24
 nudging objects 106

O

object details 119
 applying/managing 119
 changing 120
 changing defaults 121
 changing stitch type 58
 current 120
 defaults 119
 existing objects 120
 saving current 120

saving to template 123
 templates 121
Object Details dialog 58
 Appliqué tab 138
 Dimensions tab 107, 109, 157
 Feathering tab 134
 Fill Stitch tab 59–61, 62, 121, 136, 164
 Gradient Fill tab 135
 Lettering tab 146, 147, 148, 155, 156, 165
 Line Stitch tab 54, 67
 Parallel Fill tab 115
 Photo Click tab 96
 Underlay tab 125, 127
Object Details tool 120, 136, 206
Object Properties dialog
 Fill Stitch 69
 object recognition 180
objects
 appliqué 137
 arranging 106
 backtracking 132
 changing colors 73
 cloning 101
 combining 99
 copying and pasting 100
 creating duplicates 132
 creating with Satin Fill 59
 cutting holes 132
 deleting 102
 duplicating 101
 editing lettering 154
 flipping 111
 grouping 108
 locking and unlocking 108
 moving 106
 nesting 102
 repeating 132
 resequencing 99, 102
 reshaping 112
 rotating 110
 scaling 109
 selecting 37
 transforming 106
 traveling by 32
 ungrouping 108
See also modifying objects
offsetting
 filled holes (Parallel Fill) 133
online help 8, 9
online manual 8
 Open Design tool 190, 208
 Open dialog 22, 123
 open stitching, Travel on Edge 136
 Open tool 22, 205
opening
 Design Gallery 186
 designs 190
 EasyEdit 22
 opening designs 22

existing 22
 preview window in Easy Edit 22
orientations
 circular 150
 custom 151
 horizontal 148
 lettering 147
 vertical 150
orientations, horizontal
 fixed-length 148
outline
 files 179
 recognition 180
 sharpening 86
 stitches, Motif Run 66
Outlined Image Preparation tool 89, 207
outlined images 89
outlines
 digitizing 93
 sharpening 89
 outlines, selecting objects with 38
Overview Window tool 29, 208

P

palette, *see* color palette
palette colors, match to image 92
panning designs 29
Parallel Embossed Fill tool 55
Parallel Embossed Fill-Circle tool 56
Parallel Embossed Fill-Rectangle tool 57
Parallel Fill
 adjusting stitch angle 115
 Circle tool 207
 cutting holes 132
 filling holes 133
 Motif Fill 68
 open stitching 136
 Rectangle tool 207
 stitch angle 115
 tool 207
 Travel on Edge 136
Parallel Fill tool 51
Parallel Fill-Circle tool 52
Parallel Fill-Rectangle tool 52
Parallel Motif Fill tool 55, 69, 70
Parallel Motif Fill-Rectangle tool 57, 69, 70
Parallel Satin Fill tool 55
Parallel Satin Fill-Circle tool 56
Parallel Satin Fill-Rectangle tool 57
Parallel Weave Fill tool 55
Parallel Weave Fill-Circle tool 56
Parallel Weave Fill-Rectangle tool 57
Paste tool 81, 100, 103, 206
pasting

designs 195
 objects 100
patterns
 laying out on-screen (Motif Fill) 70
 selecting embossed fills 61
 Weave Fill 60
patterns, printing appliqué 176
PC memory cards 4, 181
PCMCIA cards 4, 181
peripheral devices
 connection settings 4
 setting up 1
See also hardware
perspective effects, Gradient Fill 135
Photo Click Advanced tool 96, 207
Photo Click Instantly tool 96, 207
photos, converting to embroidery 96
pictures, *see* backdrops
placement lines, appliqué 137
Polygon Select tool 39, 206
popup menus 24
positioning objects 106
pre-cut, appliqué 138
preparing images 88
presetting object details 120
preview designs 22
previewing
 printed design 173
Print Catalog Options dialog 194
print options 174
Print Options dialog 174, 175, 176, 177, 193
Print Preview dialog 174
Print Preview tool 35, 173, 176, 206
Print tool 173, 193, 206, 208
printing
 catalogs 193
 design printouts 193
 designs 173, 174, 181
 embroidery elements 175
 Hoop option 175
Processed Stitches files 180
Purge Recover and Backup Directories dialog 243
purge recovery 243

R

receiving designs 181
recognition, objects/outlines 180
recoloring objects 73
rectangles, digitizing 57
Redo tool 24, 206
redoing commands 24
redrawing designs 34
refreshing display/folders/tree

node 189
 renaming
 designs 195
 folders 194
 Repeat tool 132, 206
 repeating objects 132
 Resequence
 dialog 40
 Resequence dialog 103, 104
 displaying hidden objects 40
 selecting objects 40
 Resequence tool 40, 103, 104, 206
 resequencing
 by color 104
 by selection 103
 objects 99, 102
 using cut and paste 103
 reshape control points,
 selecting 113
 Reshape tool 68, 82, 113–115, 116,
 151, 152, 156–161, 206
 reshaping letters 158
 reshaping objects 112
 circles 114
 lettering 160
 Motif Run 68
 resolution, scanning 79
 reverse stitching
 Backtrack and Repeat 132
 Rotate CCW/CW tool 110, 206
 Rotate Hoop 90° CCW / CW tool 44,
 207
 rotating
 lettering 158
 objects 110
 objects by click & drag 110
 objects by Rotate CCW/CW 110
 patterns on-screen 71
 stamps 65
 See also rotating objects
 Run
 Backtrack and Repeat 132
 Run Line
 stitch length 53
 stitch type 53
 tool 51, 207

S

sample motifs, Motif Fill 70
 Satin
 appliqué cover stitch 138
 digitizing borders 54
 fills, creating 59
 overview 59
 spacing 59
 Satin Fill stitch
 lettering object settings 164
 Save As dialog 26, 122, 181
 Save Hoop As dialog 45

Save Options dialog 181
 save options, automatic 26
 Save tool 26, 205
 saving
 object details to a template 123
 saving designs 26, 181
 scaling
 lettering 155, 156, 157
 motifs (Motif Run) 67
 objects 109
 stamps 65
 scaling lettering 155
 scaling objects
 by click & drag 109
 on-screen 109
 to an exact size 109
 using Object Details 109
 Scan command 81
 Scanner Setup command 6
 scanning
 artwork 79
 images 78
 preparing artwork 79
 resolution 79
 sharpening 80
 tips 80
 Screen Calibration dialog 6
 security device messages 243
 select all stitches 140
 Select Border dialog 169, 171
 Select By Color dialog 31
 Select Character dialog 166
 Select Motif dialog 69
 Select Source dialog 6
 Select tool 38–39, 101, 155, 157, 159,
 206
 select, colors while traveling 39
 selecting
 designs 189
 lettering orientation 147
 reshape control points 113
 stitches 140
 stitches with bounding box 141
 selecting objects
 bounding outline 38
 consecutive 38
 grouping 108
 point and click 38
 resequencing by selection 103
 while traveling 39
 with Polygon Select 39
 with the Resequence dialog 40
 selection handles, rotating 110
 Send to Machine tool 46, 182, 206
 sending designs 181
 sequence
 checking in Easy Edit 33
 resequencing 103
 traveling 33
 Sequence dialog 161
 sequencing, letters 161
 Set Color command 48
 settings
 adjusting view 189
 Setup menu
 Work Environment 26, 43
 Work Environment > Display 47,
 48
 SEW format 179
 shading effects, Gradient Fill 135
 Shortcut to Windows Properties
 dialog 191
 shortcuts, keyboard 204
 Show Selected Color Only
 command 31
 Show Selected Objects
 command 31
 single designs, writing to ATA
 card 183
 Single Run Line tool 52
 size
 Embossed Fill 62
 measuring designs 25
 skewing objects
 by click and drag 110
 patterns on-screen 71
 with rotation handles 110
 Slow Redraw
 dialog 34
 tool 34, 208
 sorting
 using details lists 193
 using View menu 193
 spacing
 embossed fills 62
 Gradient Fill 135
 individual letters 152
 lettering 151
 lines of lettering 152
 open spacing 136
 Weave Fill stitches 60
 spacing, grid 43
 special characters
 selecting 166
 special effects, lettering 167
 Split Block tool 143, 207
 splitting
 stitch blocks 143
 squares, digitizing 57
 stabilizing with underlays 124
 stamps
 rotating/flipping/scaling 65
 scaling 66
 selecting/inserting 64
 Standard toolbar
 Copy 100, 206
 Cut 103, 206
 New 24, 205
 Open 22, 205
 Paste 81, 100, 103, 206
 Print 173, 206
 Print Preview 35, 173, 176, 206
 Redo 24, 206

Save 26, 205
 Send to Machine 46, 182, 206
 Stop 206
 Switch to EasyDesign 206
 Switch to EasyEdit 206
 Undo 24, 206
 Write to Card 183, 206
stitch angles
 adjusting 115
 Embossed Fill 62
 fixed 55
 setting for Parallel Fill 115
 turning stitches 55
stitch blocks, splitting 143
stitch files 179
 supported formats 209
stitch length
 Run and Triple Run 53
Stitch Mode tool 141–143, 207
Stitch Select While Traveling tool 39, 141, 208
stitch settings
 appliqué 138
stitch spacing
 adjusting Satin 59
 Weave Fill 60
stitch types
 applying to lettering 164
 Motif Fill 68
 Motif Run 66
 overview 58
 Run and Triple Run 53
 selecting 58
stitch values
 angle (Embossed Fill) 62
 Embossed Fill 61
 length (Weave Fill) 61
 size (Embossed Fill) 62
 stitch type 58
 Weave Fill 60
stitches
 Center Run underlay length 126
 deleting 143
 digitizing lines 52
 editing 17, 140
 inserting 142
 moving 142
 selecting 140
 selecting all 140
 selecting by needle point 141
 selecting while traveling 141
 selecting with bounding box 141
 stitch types 58
 traveling by 32, 33
 Weave underlay length 126
See also editing stitches
See also selecting stitches
 stitching order, *see* sequence
 stitching sequence, viewing 32
 Stop tool 206
 summary information, display 187
 Switch to EasyDesign tool 206

Switch to EasyEdit tool 206
symbols
 Character Map 166
 selecting 166
system preferences
 automatic backup 26
 automatic save 26

T
 tackdown, appliqué 137
templates 119
 creating 122
 custom 24, 190
 deleting 123
 managing 121
 modifying 122
 NORMAL 122
 saving object details 123
 using 122
 using the NORMAL template 24
thread colors 72
See also colors
toolbars
 Edit toolbar 206
 list of all toolbars 205
 selecting commands 23
 showing 23
tools
 list of all tools 205
 showing toolbars 23
Touch Up Picture command 83
transforming
 lettering 157
 objects 106
Travel on Edge effect 136
traveling
 by color 32, 33
 by stitches 32, 33
 overview 33
 selecting colors while traveling 39
 selecting objects 39
 selecting stitches 141
 tools, travel by stitches 33
 using the arrow keys 34
tree node, refresh 189
trim in place, appliqué 139
Triple Run Line tool 52
troubleshooting 242
 minimum requirements 242
 purge recovery 243
 security device messages 243
Turning Angle Embossed Fill tool 55
Turning Angle Fill tool 51, 207
Turning Angle Satin Fill tool 55
Turning Angle Weave Fill tool 55
 turning stitches 55

U
Underlay tool 125, 206
underlays
 adjusting Center Run settings 126
 adjusting Edge Run settings 126
 adjusting Zigzag settings 126
 selecting a type 125
 stabilizing 124
 Zigzag 126
Undo tool 24, 206
 undoing commands 24
Ungroup tool 108
 ungrouping objects 108
Unlock command 108
unlocking
 backdrops 108
 objects 108

V
 validating folders 189
 vector formats, supported 210
 vertical orientations 150
View menu
 Display Hoop 25
 Measuring Tape 25
 Show Selected Color Only 31
 Show Selected Objects 31
 User Preferences 187
 Zoom Whole Design 28, 29
 Zoom Whole Hoop 29
view settings, adjusting 189
View toolbar
 Back 32, 33, 208
 Display Grid 25, 208
 Display Hoop 208
 Display Images 35, 208
 Display Needle Points 30, 208
 Forward 32, 33, 208
 Jump by 1 Stitch 33, 208
 Jump by 10 Stitches 33, 208
 Jump by 100 Stitches 33, 208
 Jump by Color 32, 33, 208
 Jump by Object 32, 39, 208
 Jump to Start/End Design 32, 33
 Overview Window 29, 208
 Slow Redraw 34, 208
Start/End Design 208
Stitch Select While Traveling 39, 141, 208
Visualizer 30, 208
Zoom Box 29, 208
Zoom In 29, 207
Zoom Out 29, 208
viewing
 design information 35
 images 35
 information online 8

modes 28
objects by color 31
stitching sequence 32
viewing designs 28
connectors 30
display options 30
displaying hidden objects 40
needle points 30
panning 29
redrawing slowly 34
selected parts only 31
show all 28
Visualizer 30
zooming 29
Visualizer tool 30, 208
Vizualizer, viewing in 30

W

Weave Fill
values 60
Weave Fill stitch
lettering object settings 164
Weave underlay 126
Work Environment > Display
dialog 45
Work Environment command 26,
43, 47
Work Environment dialog 43
Autosave tab 26
Display tab 43, 47, 48
Write to Card tool 183

X

X and Y coordinates, setting for
objects 107

Z

Zigzag underlay 126
adjusting settings 126
Zoom Box tool 29, 208
Zoom In tool 29, 207
zoom in/out 29
Zoom Out tool 29, 208
Zoom Whole Design command 28,
29
Zoom Whole Hoop command 29